

Southwest Regional Solid Waste Commission

Solid Waste Management Plan

August 2014 final draft

Cottonwood, Jackson, Lac qui Parle, Lincoln,
Lyon, Murray, Nobles, Pipestone, Redwood,
Renville, Rock, and Yellow Medicine Counties

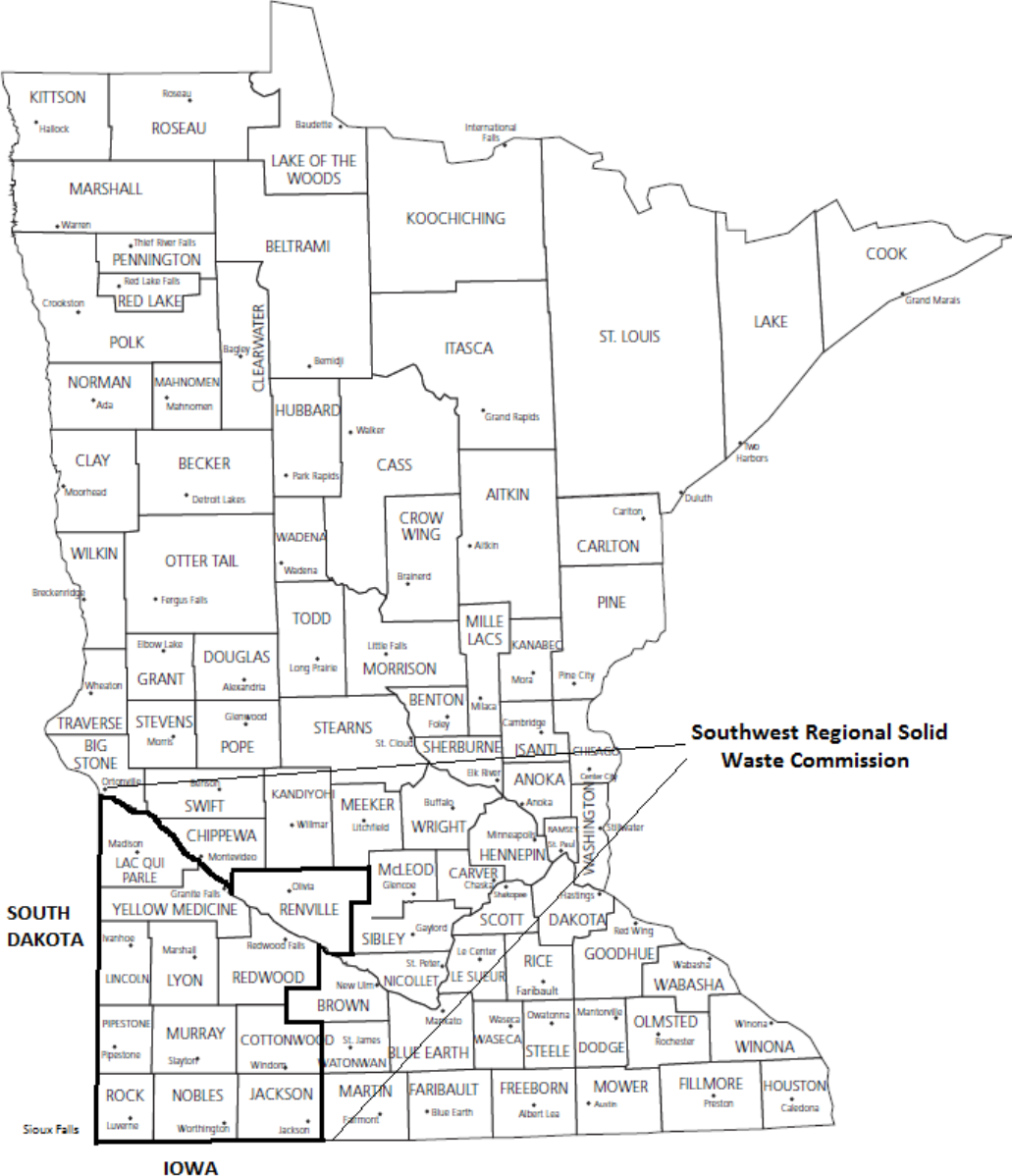


Table of Contents

- I. EXECUTIVE SUMMARY7**

- II. BACKGROUND INFORMATION.....17**
 - II. a. Demographic, Geographic and Regional Information 17*
 - II. b Solid Waste Collection and Generation 31*
 - II. c. Construction and Demolition Debris 47*
 - II. d. Major Solid Waste Generators..... 49*
 - II.e. Review of Recent Local and Regional Solid Waste Planning and Initiatives.....53*

- III. EXISTING INTEGRATED SOLID WASTE MANAGEMENT SYSTEM62**
 - III a. Solid Waste Management Policies and Goals. 68*
 - III b. Historical Regional Development..... 68*
 - III c. Description of Existing Resource Recovery Programs or Systems in Use. 71*
 - III d. Description of Land Disposal Facilities in use..... 72*
 - III e. Costs associated with operating and maintaining the system. 74*
 - III f. Summary of the achievements, opportunities, challenges, or problems with the existing system, including, but not limited to, market and economic conditions, availability of resource recovery programs or facilities, and the availability of local and state funding resources. 75*

- IV. PROPOSED INTEGRATED SOLID WASTE MANAGEMENT SYSTEM77**

- V. POLICIES AND PROGRAMS: SOLID WASTE SYSTEM EVALUATION AND TEN YEAR IMPLEMENTATION PLAN81**
 - V. a. Solid Waste Reduction 83*
 - V. b. Solid Waste Education 88*
 - V. c. Recycling 94*
 - V. d. Yard Waste..... 112*
 - V. e. Source Separated Organic Materials Composting 116*
 - V.f. MSW Composting Facilities 117*
 - V. g. Solid Waste Incineration and Energy Recovery 118*
 - V. h. Land Disposal of MSW 121*
 - V. i. Waste Tires 135*
 - V. j. Electronic Management..... 139*
 - V. k. Major Appliance Management..... 142*

V. l.	<i>Automotive Mercury Switches, Motor Vehicle Fluids and filters, and Lead Acid Batteries and Dry Cell Batteries</i>	146
V. m.	<i>Household Hazardous Waste (HHW) Management</i>	151
V. n.	<i>Land Disposal of Construction and Demolition Waste</i>	157
V. o.	<i>Solid Waste Ordinance</i>	160
V. p.	<i>County Solid Waste Staff</i>	163
V. q.	<i>Solid Waste Program Funding</i>	166
V. r.	<i>Plan Review and Ten Year Update</i>	166
V. s.	<i>Development of the GVT</i>	167
V. t.	<i>Development of the Solid Waste Program Budget</i>	167
V. u.	<i>Alternatives to Proposed System</i>	169
V. v.	<i>Environmental and Public Health Impacts</i>	169
V. w.	<i>Solid Waste Facility Siting</i>	172
V. x.	<i>Public Participation</i>	172
V. y.	<i>Multi County Planning</i>	173

List of Tables

Table E1:	Aggregated MSW Solid Waste Management Method Objectives for the SWRSWC area	8
Table E2:	SWRSWC Collective Budget of the 12 Counties	9
Table E3:	Southwest Regional Solid Waste Commission Budget.....	11
Table E4:	SWRSWC HHW Facilities by County	14
Table 1:	Population change, 2000 to 2010	18
Table 2:	SWRSWC Planning Area Population by County 1900 – 2011 estimates	19
Table 3:	Number of Cities & Townships by County, Number of Cities and Townships in Population Categories by County (2010 Census)	19
Table 4:	2011 Population Estimates, Percent of City and Rural MSW Collection.....	20
Table 5:	2010 Population by Age and Median Age in Counties	22
Table 6:	SWRSWC Population and Projections by County, 2000 - 2040.....	24
Table 7:	SWRSWC Household and Household Projections by County, 2000 – 2020.....	24
Table 8:	Race and Diversity, 2010 and 2000	26
Table 9:	SWRSWC Area: Minnesota Land Use and Cover Statistics.....	27
Table 10:	Total Employment and Wages, All Industries (2011)	28
Table 11:	Median Household Income and Percentage of Persons below Poverty Level.....	29
Table 12:	SWRSWC Annual MSW Landfilled, Processed for Resource Recovery, and On-site Disposal (tons) 2007 – 2011	31
Table 13:	Percent of Residents with Solid Waste Collection Service and On-site Disposal.....	33
Table 14:	Waste Haulers in the SWRSWC Area (2012)	34-36

Table 15: MSW Hauler License and Fees Required by County	36
Table 16: Disposal Facility Fees.....	37
Table 17: Residential Solid Waste Rate Ranges for Containers by County.....	39
Table 18: MSW Disposal Rates Calculated by Cubic Yard, by Container Size	39
Table 19: Commercial Solid Waste Rates by Yard	40
Table 20: County Solid Waste Assessment Fees in Southwestern Minnesota	41
Table 21: Incentives and Initiatives to Reduce Waste and to Recycle.....	42
Table 22a: Aggregate Composition by Primary Material Category	43
Table 22b: Lyon County Regional Landfill – 2013 Waste composition Results.....	44
Table 22c: 1999 Waste Composition Study Results	45
Table 23: Estimated Percentage and Tonnage of MSW by Residential and Commercial/Industrial Sectors.....	46
Table 24: Construction and Demolition Landfills and Volumes.....	48
Table 25: Major Solid Waste Generators, Waste Type and Volume (4 largest in each county)	50-51
Table 26: Solid Waste Planning.....	52
Table 27: Pharmaceutical Waste Collection County/Year Initiated/Contact Information	58
Table 28: Total MSW (tons) Generated and MSW Available for Resource Recovery and Landfilling, by County and Disposal Facility/Site (2011)	67
Table 29: County Plan Approvals/Adoptions	70
Table 30: Costs Associated with Operation and Maintenance of MSW Facilities	75
Table 31: Preferred Disposal Facilities	78
Table 32: Lyon County MSW Shredding vs RDF Production Comparison and Cost Estimates	79
Table 33: Recycling by Sector 2008-2012	99
Table 34: Annual Recycling Tonnages Collected, Processed and Marketed by Sector or Program for the Last Five Years	100-101
Table 35: Estimated Yard Waste Composting and Actual Known Volumes Collected	114
Table 36: Tons of MSW to Landfills.....	123
Table 37: MPCA Closed Landfill Site Risk Priority Score, Land Use at the Closed Landfill Property.....	133
Table 38: Permitted Storage and Processing Sites for Waste Tires	136
Table 39: Appliance Recyclers Utilized by the SWRSWC Counties	143
Table 40: Tons of Appliances Generated	143
Table 41: Quantity of Automotive Fluids, Filters and Batteries Recycled	148
Table 42: HHW Facilities by SWRSWC County	152
Table 43: Construction and Demolition Landfills and Volumes.....	157
Table 44: Existing County Staff FTE.....	163
Table 45: Landfill Capacity Use Totals.....	168

List of Figures

	Page
Figure 1: Southwest Regional Solid Waste Commission Planning Area.....	7
Figure 2: Percent Rural Population	20
Figure 3: 2010 Population Density by Census Tract.....	21
Figure 4: Highway Network in SW Minnesota	29
Figure 5: SWRSWC MSW by Disposal Type 2007 to 2011.....	31
Figure 6: Demolition Debris and Construction Landfills in Southern Minnesota	47
Figure 7: Percentage of MSW Flow from County of Origin to Destination Facility.....	63
Figure 8: Disposal Facilities in 2011	64
Figure 9: 2011 Resource Recovery Facilities and Transfer Stations in Minnesota.....	65
Figure 10: Waste Combustion Facilities in Minnesota.....	66

APPENDICES

- A. GOAL VOLUME TABLE (Summary Objective Table and Summary Objective data) and BUDGET
 - i. Cottonwood County 2
 - ii. Jackson County 7
 - iii. Lac qui Parle County 12
 - iv. Lincoln County 17
 - v. Lyon County 22
 - vi. Murray County 27
 - vii. Nobles County 32
 - viii. Pipestone County 37
 - ix. Redwood County 42
 - x. Renville County 47
 - xi. Rock County 52
 - xii. Yellow Medicine County 57
 - xiii. SWRSWC 62
- B. CONTRACTS, AGREEMENTS
 - i. SWRSWC Joint Powers Agreement 2
 - ii. Landfill Reciprocal Agreement 21
 - iii. HHW Facility Agreements 23
 - 1. Lyon County with Cottonwood, Jackson, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Rock, Yellow Medicine 36
 - 2. Kandiyohi County Facility with Lac qui Parle and Renville 54
 - iv. MSW and Recycling Hauler Agreements 72
- C. DETAILED DEMOGRAPHIC DATA
- D. RESOLUTIONS, DOCUMENTS
 - i. RESOLUTION In Support of Lyon County Landfill Expansion Joint Review of Certificate of Need Support of 50% Regional Recycling Rate 2
 - ii. South West Region 50 Percent Recycling Goal 3
- E. ORDINANCES
 - i. Cottonwood County 2
 - ii. Jackson County 30
 - iii. Lac qui Parle County 87
 - iv. Lincoln County 112
 - v. Lyon County 132
 - vi. Murray County 155
 - vii. Nobles County 183
 - viii. Pipestone County 226
 - ix. Redwood County 250
 - x. Renville County 270
 - xi. Rock County 282
 - xii. Yellow Medicine County 327
- F. County and SWRSWC Adoption of Plan Documentation (*to be added when approved*)
- G. Glossary / Definitions

Southwest Regional Solid Waste Commission Regional Plan

FINAL DRAFT August 2014

EXECUTIVE SUMMARY

This regional solid waste management plan is a combined effort of the twelve member counties (Cottonwood, Jackson, Lac qui Parle, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Renville, Rock, and Yellow Medicine) of the Southwest Regional Solid Waste Commission (SWRSWC) Figure 1. The SWRSWC is a 12 county Joint Powers Board, whose goal is to foster an integrated approach to solid waste management in the region and to follow the order and preference of waste management strategies identified in 115A.02. The purpose of the SWRSWC Joint Powers Agreement (JPA) is to allow for the development and implementation of solid waste programs on behalf of the counties, as authorized by Minnesota Statutes, Chapter 400 and 115A. The SWRSWC JPA has the authority to adopt and amend a solid waste management program or plan for the Counties and to require the delivery of waste generated in the Counties to designated facilities pursuant to State Law. In furtherance of such programs or plans, the Joint Powers Board also has the authority to contract for solid waste collection, processing, disposal and management service, and to purchase, acquire, construct operate and sell both real and personal property and facilities including a transfer station system, a sanitary landfill system and a processing system. The Agreement also authorizes the Commission to finance the purchase, plan, construction and operation of property and facilities in furtherance of the Commission's solid waste management program through appropriations by the Counties, grants and loans from the Minnesota Office of Waste Management, the sale of bonds or other obligations secured by revenues of the Commission pursuant to Minnesota Statutes, Section 471.59, Subdivision 11, and other applicable law, and any other lawful financing method available to the Commission or the Counties.

The primary purpose of this regional plan is to develop goals and objectives that will detail how waste is to be managed in the twelve-county region for the next ten years that will advance abatement and recycling programs. The plan reviews the past and present solid waste management systems, solid waste abatement programs and policies, and anticipated future solid waste management activities within the region. It also

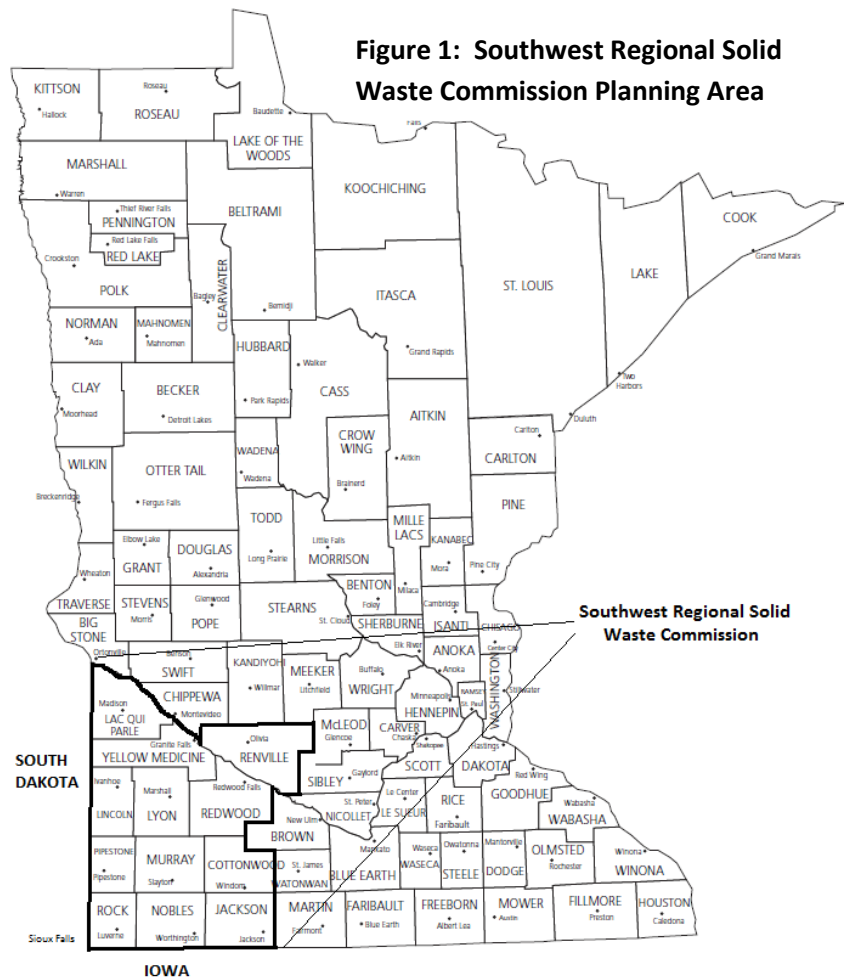


Figure 1: Southwest Regional Solid Waste Commission Planning Area

incorporates significant changes that have been made to the regional system since the Solid Waste Management Plans of 2003-2009 were written and will combine the individual plans into one regional twelve county plan. This document will outline the options available to the counties for managing multiple waste streams. This plan is also intended to discuss alternatives for future solid waste systems and recommend best practices for the SWRSWC. A Glossary (Appendix G) has been added as to clarify meanings of terminology used in this Plan.

The Goal Volume Tables and the Budgets for each of the counties as well as the Regional GVT and Budget are located in Appendix A. A summary of the management method objectives is and summary of these costs for years 2011, 2013, 2014, 2015, 2017, and 2022 is shown in Table E- 1. Table E-2 presents the SWRSWC Budget from 2011 – 2022.

The SWRSWC recycling goal of 50% by 2011 was not achieved. By the year, 2022, a 51.2 % recycling rate excluding organics is projected to be achieved. Organic recycling will increase from 2.27% to 4.1% in the ten year time from. Landfilling will be reduced from 52.3% to 39.8% and on-site disposal will be reduced from 7.1 % to 4.7%.

In 2011 the SWRSWC area generated 156,413 tons of MSW. At the end of the ten year planning period, it is estimated the area will generate 152,397 tons of MSW and abate more than 55% of the waste generated through recycling, including organic recycling. The remainder is assumed to be landfilled or disposed on-site. Table E-1 presents the waste management system components and the percent to be managed through abatement and identifies the remainder to be landfilled. The GVT’s in Appendix A provide details by county and region of the ten year estimate of the regions waste system flow.

Table E- 1: Aggregated MSW Solid Waste Management Method Objectives for the SWRSWC area

	<i>2011</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2017</i>	<i>2022</i>
Planning Year #		Planning Yr 1	Planning Yr 2	Planning Yr 3	Planning Yr 5	Planning Yr 10
RECYCLE -- excluding Organics Recycle	38.0%	42.9%	45.2%	46.8%	48.2%	51.1%
RECYCLE -- Organics (excl. YW compost)	2.27%	2.84%	2.92%	3.22%	3.50%	4.10%
WASTE-to-ENERGY Combustion	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
LANDFILL -(includes WTE processing residue)	52.3%	47.2%	45.1%	43.6%	42.4%	39.8%
On-Site Disposal - burned / buried	7.1%	6.8%	6.5%	6.2%	5.6%	4.7%

Budget

The revenue sources for the counties include annual SCORE funding, county tip fee revenue, recycling revenue, HHW funding, grants such as MPCA, Resource Conservation District (RC&D), Greater Minnesota Landfill Clean Up Fund other incomes such as land rent, service fees, license fees, solid waste assessments .

The expenditures include salaries and wages, recycling program costs, public education, landfill, transfer station, demo fill, and administration costs. See Table E – 2 for the SWRSWC collective budget for the 12 Counties. Section V of the Plan identifies costs for each of the programs, and the budgets are identified by county in Appendix A. The expenditures will increase over the ten year time frame. At the same time, revenues will not increase at the same rate. Increased educational efforts and waste reduction will be the

key areas for resources to help manage solid waste activities. The Solid Waste Commission will collectively take on some of the waste education and communication activities, as will be identified in the communication plan to help reduce duplication of resources and increase outreach activities. The budget for the SWRWC is identified in Table E-3 and in Appendix A.

Table E- 2: SWRWC Collective Budget of the 12 Counties

Expenditures	2011	2013	2014	2015	2017	2022
SCORE Planning, Oversight & Adm.	\$867,514	\$784,443	\$813,280	\$829,546	\$863,059	\$952,887
Waste Education/Source Reduction	\$85,758	\$109,013	\$114,137	\$116,420	\$121,124	\$133,730
Recycling:						
Capital Outlay	\$14,641	\$54,228	\$19,073	\$15,599	\$16,230	\$17,919
Operations	\$359,061	\$366,242	\$373,567	\$396,038	\$396,432	\$437,693
Contracts	\$1,355,039	\$1,483,011	\$1,557,727	\$1,647,582	\$1,714,144	\$1,892,554
Other Operating Expenses	\$83,029	\$84,690	\$260,183	\$265,387	\$276,109	\$304,846
<i>Recycling Total</i>	\$1,779,111	\$1,990,359	\$2,176,631	\$2,290,009	\$2,366,919	\$2,613,270
Yard waste Management	\$1,579	\$2,888	\$860	\$877	\$913	\$1,008
Household Hazardous Waste	\$403,781	\$395,476	\$419,868	\$428,266	\$445,568	\$491,943
Litter Prev.	\$3,864	\$2,910	\$2,968	\$3,028	\$3,150	\$3,478
Grants to other unit of gov	\$90,173	\$0	\$0	\$0	\$0	\$0
Demolition Waste	\$377,513	\$293,263	\$299,129	\$305,111	\$317,438	\$350,477
MSW Transfer Station	\$304,313	\$312,451	\$318,700	\$325,074	\$438,207	\$483,816
Landfill	\$2,620,000	\$2,095,000	\$2,136,900	\$2,179,638	\$2,267,695	\$2,168,495
Landfill liner construction, etc.	\$0	\$0	\$2,584,737	\$0	\$500,000	\$0
Financial Assurance Fund	\$40,000	\$81,664	\$83,297	\$202,711	\$124,840	\$60,548
GMLCF or recycling rebate to other counties	\$243,000	\$235,000	\$239,700	\$244,494	\$254,372	\$280,847
Special Wastes:						
Waste Tires	\$31,406	\$32,034	\$37,675	\$38,428	\$39,981	\$44,142
Appliances	\$7,685	\$7,839	\$18,995	\$19,375	\$20,158	\$22,256
Used Oil/Filters/Batteries	\$1,733	\$1,768	\$1,803	\$1,839	\$1,913	\$2,113
Electronics	\$29,740	\$30,335	\$44,941	\$45,840	\$47,692	\$52,656
Fluorescent Lamps	\$13,490	\$13,760	\$16,735	\$17,070	\$17,759	\$19,608
<i>Special Wastes Total</i>	\$86,054	\$87,775	\$122,231	\$124,675	\$129,712	\$143,213
Staff & Administration/Benefits	\$296,286	\$302,212	\$308,256	\$314,421	\$327,124	\$361,171
Administration:						
Office Equipment	\$12,104	\$12,346	\$12,593	\$12,845	\$13,364	\$9,742
Misc. Office Expenses	\$16,836	\$17,173	\$17,516	\$17,866	\$18,588	\$20,523
Training	\$10,246	\$10,451	\$10,660	\$10,873	\$11,312	\$12,490
Solid Waste Authority (Red / Ren)	\$0	\$0	\$303,056	\$309,117	\$321,605	\$373,832
<i>Administration Total</i>	\$39,186	\$39,970	\$343,825	\$350,702	\$364,870	\$416,587
HHW and problem materials management	\$42,079	\$30,957	\$31,576	\$32,208	\$33,509	\$36,996
Total Program Cost:	\$7,280,211	\$6,763,382	\$9,996,096	\$7,747,179	\$8,558,499	\$8,498,466
Gross cost per HH per year:	\$115	\$107	\$158	\$122	\$135	\$134
Gross cost per ton MSW generated	\$46	\$47	\$48	\$49	\$51	\$56
Revenues						
General Revenue and Service Fees	\$1,615,990	\$1,636,816	\$1,669,552	\$1,702,943	\$1,771,742	\$1,931,443
<i>General Rev(sp assess, levy, pro tax, etc)</i>	\$914,808	\$920,880	\$939,297	\$958,083	\$996,790	\$1,094,863
<i>Service Fee</i>	\$502,045	\$512,816	\$523,072	\$533,534	\$555,089	\$594,167
<i>Processing facility tip fee</i>	\$18,329	\$19,007	\$19,387	\$19,775	\$20,574	\$22,715
<i>Land Disposal facility surcharge</i>	\$319,405	\$534,368	\$529,729	\$525,150	\$516,171	\$500,721
SCORE Grant	\$678,074	\$678,074	\$678,074	\$693,779	\$693,779	\$693,779

<i>Grants</i>	\$11,529	\$0	\$0	\$0	\$0	\$0
<i>HHW Funding</i>	\$90,508	\$53,371	\$53,371	\$53,371	\$53,371	\$53,371
	\$0	\$0	\$0	\$0	\$0	\$0
<i>Material sales</i>	\$279,722	\$206,499	\$210,629	\$214,842	\$223,521	\$246,763
<i>Other</i>	\$176,236	\$180,833	\$184,438	\$188,115	\$195,690	\$240,697
SCORE Revenue Total	\$3,189,794	\$3,308,968	\$3,345,180	\$3,397,974	\$3,474,849	\$3,689,489
Tip Fees for special and problem wastes	\$324,050	\$330,531	\$337,142	\$343,884	\$357,777	\$395,015
Solid Waste Assessment	\$873,514	\$1,056,369	\$1,118,564	\$1,283,081	\$1,315,004	\$1,187,025
Tri county Refund	\$37,097	\$1,317	\$0	\$0	\$0	\$0
Material Sales	\$6,882	\$7,020	\$7,160	\$7,303	\$7,598	\$48,373
Service Fee	\$83,000	\$84,660	\$86,353	\$88,080	\$91,639	\$99,193
Special Wastes	\$10,692	\$10,906	\$16,124	\$16,446	\$17,111	\$18,777
Other Income - investments, land rent, misc.	\$33,322	\$33,889	\$34,466	\$35,056	\$36,270	\$94,137
Landfill	\$2,788,389	\$2,708,511	\$2,762,681	\$3,228,348	\$2,878,474	\$2,800,225
Demolition landfills	\$486,944	\$396,704	\$404,638	\$412,731	\$429,405	\$464,802
MSW Transfer Station	\$272,217	\$277,661	\$283,215	\$288,879	\$400,550	\$590,627
GMLCF (Lyon, Nobles, Cottonwood, Renville)	\$397,344	\$387,900	\$316,307	\$272,242	\$272,861	\$276,309
Solid Waste Licensing	\$3,200	\$2,760	\$2,770	\$2,781	\$2,802	\$2,859
Total Program Revenues	\$8,506,444	\$8,607,196	\$8,714,600	\$9,376,806	\$9,284,340	\$9,666,831
Net Budget	\$1,226,233	\$1,843,815	(\$1,281,495)	\$1,629,628	\$725,841	\$1,168,365

Existing Integrated Solid Waste Management System

All of the solid waste collected in the SWRSWC twelve county region that is not recycled or otherwise processed is being hauled by a combination of public and private waste haulers to landfills and a resource recovery facility. Landfilling accounts for 99% of the collected waste disposal method and is the predominate method of waste disposal for the SWRSWC Counties. There are four MSW landfills within the planning area that provide 96% of the collected waste disposal needs for southwest Minnesota. Landfill tipping fees range from \$45 to \$50 per ton at the four landfills. Tip fees at other MSW facilities for the remaining 4% of the waste range between \$45 (McLeod) and \$80 (Prairieland RRF). Solid Waste from Jackson County goes to the Dickenson County Iowa Landfill. This accounts for 3.5 percent of the regional waste collected and the tip fee is \$56/ ton.

In 1997 and subsequently in 2002, the SWRSWC Regional Review of Alternatives found that landfilling was the most prudent and feasible solid waste alternative, after waste reduction, reuse, and recycling. However, the Counties in the SWRSWC will continue to explore regional processing possibilities.

The SWRSWC individual County Waste Management Plans and Plan update approvals were last completed between 2002 and 2009¹. Since that time, the counties and / or region has expanded several of its waste management programs including, but not limited to the following:

- 1) Plans and studies. In 2002, the SWRSWC completed the Regional Review of Alternatives update that identified land disposal as the proposed solid waste management system in each of the 12 counties. Studies that have completed over the past ten years include: Southwest Region 50 Percent Recycling Goal (approved in 2008), Lyon County Materials Recovery Facility Feasibility Study (2006), Lyon County Feasibility of Alternative Options for MSW Management (2009), and the Lyon County landfill Gas Feasibility Study.
- 2) Reduction. Currently SWRSWC member counties maintained and operated its own programs, through Education, promotion of thrift stores, and as a model to other public entities in sharing the counties reduction and reuse policies and programs.
- 3) Landfills. Currently there are four operating landfills that are located in and serve the twelve counties of the SWRSWC. Three of the landfills, Cottonwood County, Lyon County and Renville County are owned and operated by the County. There is one privately owned landfill, Nobles County Landfill, which is owned and operated by Waste Connections. Additionally, there are two landfills that are located outside of the Region and serve counties within SWRSWC Region. Those are Dickinson County Landfill, Spirit Lake, Iowa, and McLeod County Landfill, Glencoe, Minnesota. Both of these landfills are owned and operated by Waste Management. Additional information of these landfills is located in Section III. d. in this Plan.
- 4) Contingency Agreements. In the event that any of the four facilities have a short term closure, one of the other facilities will accept waste for at least two weeks. If a long term alternative is required, this plan has identified a proposal process with evaluating factors.

¹ Table 29 provides a list of individual plan approvals by year.

- 5) Recycling. All SWRSWC Counties have residential (urban and rural) recycling paid for through the county programs, with the exception of Murray County who only pays for rural recycling; and all SWRSWC Counties offer a waste pesticide container collection opportunity. Solid Waste Administrators reported that the Schools in the SWRSWC region do recycle at least three types of recyclable materials. While Nobles County has been implementing single sort recycling since 1994, and Lincoln and Lyon counties began in 2007-2008; several of the other counties needed to wait until their multiyear recycling contracts were completed and many submitted RFP's for single sort recycling. During 2011 and 2012, the counties of Cottonwood, Jackson and Rock changed their contracts to go from sorted recyclables to a single sort collection recycling program in an effort to increase the volume of recycling. The Redwood - Renville JPA has also decided to move forward with a single sort system and is in the process of constructing a recycling facility in Redwood Falls. Murray County Recycling facility processes multiple-sort recycling from Murray and Pipestone Counties.
- 6) Pharmaceutical. During the development process of the SWRSWC Solid Waste Management Plan, discussion of pharmaceutical collections has resulted in the development of a regional brochure that lists locations in 11 of the 12 counties where the drugs can be disposed. These drugs cannot be accepted by any of the solid waste facilities, but by working together with other offices (law enforcement, water planning, and the Minnesota River Area Agency on Aging) there is an increased awareness of disposal options and keeping them out of the landfills.
- 7) Education. All SWRSWC member counties fulfill the requirements of waste education, including notices in paper, etc.
- 8) Yard Waste. Majority of the communities in the SWRSWC region have yard waste disposal locations.
- 9) Waste Tires, Electronic Management, Major Appliances, Automotive Mercury Switches, Motor Vehicle Fluids and Filters Lead Acid Batteries, and Dry Cell Batteries. The SWRSWC and its member counties prohibit the disposal of these materials reflecting Minnesota State Laws.
- 10) Ordinance. SWRSWC member counties each have individual Solid Waste Ordinances that were approved back in 1992.
- 11) Construction and Demolition Debris Management. There are 12 public or private C&D permitted facilities physically located in nine of the SWRSWC Counties. Jackson, Lincoln, and Redwood counties do not have facilities physically located in their counties and C&D disposal is directed to facilities in adjacent Minnesota facilities or on-site disposal if applicable (Permit by Rule).
- 12) Illegal Onsite Disposal. SWRSWC member counties have rural drop off sites for recycling and two counties have added MSW collection during the last five years. It is estimated that 6.9% of the rural population still dispose of MSW on-site in the Region. Some rural residents self-haul or have contracted with MSW haulers for collection.
- 13) RDF processing. Currently Jackson County is the only county that has waste that is brought to the Prairieland Refuse Derived Fuel Processing Facility.
- 14) HHW. An on-going objective of the SWRSWC has been the removal of hazardous and toxic materials from the waste stream and is emphasized through education in each of the SWRSWC counties. All counties are members of one of the two Regional HHW programs (Kandiyohi and Lyon Counties). Most counties constructed HHW facilities. Many were built as < 90 day facilities but are now greater than 90 day facilities. Table E- 4 identifies nine of the counties have either constructed HHW facilities or have

become greater than 90 day facilities in the past 10 years. The mobile collections and the product exchange continue to be a part of all county HHW programs.

Table E-4: SWRSWC HHW Facilities by County

County	Year constructed / operational	Permitted at > 90 day facility	< or > 90 day
Cottonwood	2012	July 3, 2012	greater
Jackson	1993	Jan 24, 2000	greater
Lac qui Parle	none		2 collection / yr
Lincoln	2002	Sept 5, 2006	greater
Lyon	2002	July 18, 2002	greater
Murray	2000	June 19, 2003	greater
Nobles	2002	Feb 6, 2002	greater
Pipestone	2012/2013	Dec 7, 2012	greater
Redwood		Jul 18, 2002	greater
Renville	Sept 17, 2001		Less than
Rock	2000	Sept 5, 2006	greater
YM	Mar 6, 2002		Less than

Source: MPCA and County SWA’s

Proposed Integrated Solid Waste Management System

The SWRSWC² and member counties support policies and implementation measures that result in a cost effective and prudent management of waste in the region and is consistent with the *Minnesota Waste Management Hierarchy (Minn. Stat. 115A.02b)*³. Section V of the Plan provides details (e.g., policies, staff time, budgets, and anticipated developments) for each the solid waste abatement programs in the SWRSWC area.

SWRSWC and the member counties hereby establish that waste reduction, recycling, composting, and landfilling is the preferred method of managing MSW including, but not limited to MSW collected or generated by Public Entities in the SWRSWC Counties. This will be accomplished by:

- 1.) The SWRSWC and member have a goal of a 1% solid waste reduction per year. The annual amount of waste to be reduced ranges from .06% and 2.5% in the counties.

² The SWRSWC is a Joint Powers Board with powers and authority identified in Appendix B.

³ *Minn. Stat. 115A.02b as amended reads* “The waste management goal of the state is to foster an integrated waste management system in a manner appropriate to the characteristics of the waste stream and thereby protect <http://www.pca.state.mn.us/index.php/view-document.html?gid=13909> waste management practices are in order of preference:

- (1) waste reduction and reuse;
- (2) waste recycling;
- (3) composting of source-separated compostable materials, including but not limited to, yard waste and food waste;
- (4) resource recovery through mixed municipal solid waste composting or incineration;
- (5) land disposal which produces no measurable methane gas or which involves the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale; and
- (6) land disposal which produces measurable methane and which does not involve the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale.”

- 2.) The SWRSWC and member counties propose to initiate and support education of reduce, reuse and recycle in schools. The Solid Waste Administrators will contact the schools every odd year in the planning period to verify or assist them in compliance with public entity law.
 - 3.) The SWRSWC and member counties support and plan to develop a website to make information about composting in the region available.
 - 4.) The SWRSWC and member counties will promote and support education of the detriments of open burning and on-site disposal.
 - 5.) The SWRSWC will discuss the adoption of a resolution and encourage its members to adopt a resolution prohibiting illegal on-site disposal of MSW.
 - 6.) RFD Processing. The SWRSWC will encourage member counties with waste currently being processed at an RDF Processing facility to continue this practice throughout the planning period and as opportunities present, the SWRSWC will request member counties and Joint Power Agreement to include waste incineration and organic composting as two of the alternatives to study as an alternative to landfilling.
 - 7.) The SWRSWC, working with the Solid Waste Administrators will work toward developing a uniform solid waste ordinance to serve the public.
 - 8.) The SWRSWC and member landfill counties will review and evaluate methane retrieval and recovery.
 - 9.) A key element of the SWRSWC Plan is implementation of a more comprehensive approach to education. The development and implementation of a Communication Plan will enable counties to achieve
 - a) A uniform message.
 - b) To provide information to specific groups (i.e. business and commercial) and to the general public to increase the awareness of waste issues.
 - c) To increase the volume of materials recycled.
 - d) The SWRSWC will look for ways to engage the commercial sector and encourage recycling while reducing the volume of waste to be disposed.
- The SWRSWC looks forward to the next ten years and reaching new audiences that will open new opportunities for MSW management, with an emphasis on waste reduction, reuse and recycling.
- 10.) To measure the effectiveness of the programs being implemented, the SWRSWC will annually review the progress of the goals for landfill abatement, processing and resource recovery by an annual comparison of the SCORE Report with the GVT projections.
 - 11.) Waste Tires, Electronic Management, Major Appliances, Automotive Mercury Switches, Motor Vehicle Fluids and Filters Lead Acid Batteries, and Dry Cell Batteries. The SWRSWC and its member counties will continue to promote proper collection and storage of these wastes through public collections or those of private businesses.
 - 12.) Construction and Demolition. SWRSWC and its member counties will continue to direct construction and demolition debris to nearest C&D facility. The SWRSWC will encourage member counties to include C&D facilities during their Comprehensive Plan and Zoning Code updates.
 - 13.) Household Hazardous waste. SWRSWC and its member counties will continue to provide access to HHW disposal to all residents in the region.

14.) Solid Waste Management staff will ensure that all county offices and other public entities (e.g., cities, towns, and schools) are recycling at least three of the following four materials: paper, glass, plastic, or metal as mandated in Minn. Statute, Section 115A.151. 14) The SWRSC Counties will ensure that all public entities are aware of Minn. Statute, Section 115A.471, "Public Entities; Management of Solid Waste" which states that if a public entity enters into a contract for the management of MSW that manages the waste using a practice that is ranked lower than the practice selected in the Solid Waste Management Plan, then the entity must submit information to the MPCA as detailed in the statute. Once this Plan is approved by the MPCA, it governs all solid waste management in the counties. Minnesota Statute 115A.46, subd.5, Jurisdiction of Plan states:

- a) After a plan has been submitted for approval, a public entity within the counties may not enter into a binding agreement governing a solid waste management activity that is inconsistent with the county approved plan without the consent of the county; and
- b) After a solid waste management plan has been approved, a public entity within the counties may not develop or implement a solid waste management activity, other than an activity to reduce waste generation or reuse waste materials, which is inconsistent with the solid waste plan that the county is actively implementing without the consent of the county.

This plan was developed and completed by the Southwest Regional Development Commission, the Solid Waste Administrators of the twelve member counties of the SWRSC, with assistance of the MPCA.

II. BACKGROUND INFORMATION

II. a. Demographic, Geographic and Regional Information⁴

History of the Southwest Regional Solid Waste Commission. In June 1993, a formal Joint Powers Agreement was signed, creating the Southwest Regional Solid Waste Commission (12 counties). Previous to the formation of the Joint Powers Board (1980's to early 1990's), there were multiple county planning efforts. Task Forces hired consultants to develop the first county solid waste management plans as well as worked together in recycling efforts. In the early 1990's the planning area experienced the closing of several individual county landfills as well as implementation of the SCORE legislation.

The Counties found it to be beneficial to work together, sharing resources (joint plans and shared waste facilities), as well as realized that as a formal body they were able to apply for funds to initiate projects, and as a group of counties were listened to by both legislators as well as state agencies. As such they established the following goal: *To foster an integrated approach to solid waste management in the region and to follow the order and preference of waste management strategies identified in 115A.02 [Minnesota Waste Management Act].* The intent of the Counties is that *they cooperate in a joint venture to provide the greatest public service benefit possible for the entire contiguous twelve (12) county area encompassed by the Counties in planning, management, and implementation of methods to deal with solid waste in southwest Minnesota. The powers of the SWRSWC are identified as follows: "It is the purpose of this Agreement to grant the Commission the power to adopt and amend a solid waste management program or plan for the Counties; to require the delivery of waste generated in the Counties to designated facilities pursuant to State Law, in furtherance of such program or plan; to contract for solid waste collection, processing, disposal and management service; and to purchase, acquire, construct operate and sell both real and personal property and facilities including a transfer station system, a sanitary landfill system and a processing system. The Agreement also authorizes the Commission to finance the purchase, plan, construction and operation of property and facilities in furtherance of the Commission's solid waste management program through appropriations by the Counties, grants and loans from the Minnesota Office of Waste Management, the sale of bonds or other obligations secured by revenues of the Commission pursuant to Minnesota Statutes,..."*

Major accomplishments of the Southwest Regional Solid Waste Commission (SWRSWC) include:

- 1) Effective facilitation of communication between the counties.
- 2) Coordinated development of solid waste ordinances and plans.
- 3) Regional Household Hazardous Waste Facility.
- 4) Multi-County mobile HHW collection unit and Regional HHW facility.
- 5) Development of regional landfills (Lyon County Regional Landfill).
- 6) Reciprocal agreement between region's landfills *(Cottonwood, Nobles, Lyon).
- 7) Coordinated application and implementation of education grants.
- 8) Recognition as an organized body.
- 9) Adopted Regional Review of Alternatives (1997) and the update to the Regional Review of Alternatives (2002) and was incorporated into the individual county Solid waste management Plans (last two cycle).

⁴ Sources from which the demographic information was derived include the US Census, Department of Employment and Economic Development, and Cameron Macht, DEED Regional Analyst for Central and Southwest Minnesota.

Population Trends and Distribution. According to data from the 2010 Census, the 12-county Southwest Regional Solid Waste Commission (SWRSWC) area is home to just under 155,000 people, after losing nearly 5,200 people over the last decade (-3.2 %). That population decline was in contrast to the growth experienced in the state of Minnesota as a whole, which gained about 385,000 additional people over the last 10 years (+7.8%) (Table 1). The SWRSWC planning area accounts for about 2.9 % of the state’s total population, down from 3.3 % in 2000. Southwest Minnesota’s population decline is part of a long-term trend. Over the last century, the area saw a steady increase in population from 1900 to 1940 and has decreased in population since. Lyon County however, has trended with an increase in population over the past 10 years (Table 2).

In the last decade, three of the ten fastest declining counties in the state were located in the region, including the sixth (Lac qui Parle Co.), eighth (Jackson Co.), and tenth (Lincoln Co.) fastest declining counties. All three of these counties declined over - 8.0 percent in the last ten years, while just two counties in the region (Lyon and Nobles) saw a population increase from 2000 to 2010.

Lyon County is the largest populated county in Southwest Minnesota and the 41st largest (out of 87 counties) in Minnesota, with 25,857 people. Nobles County was the fastest growing county in the region, adding 546 residents from 2000 to 2010, a 2.6% increase. The remainder of the planning area counties has lost population. The SWRSWC area

Table 1: Population Change, 2000 - 2010			2000 to 2010	
Geography	2010	2000	Change	Percent
Cottonwood	11,687	12,167	-480	-3.9%
Jackson	10,266	11,268	-1,002	-8.9%
Lac qui Parle	7,259	8,067	-808	-10.0%
Lincoln	5,896	6,429	-533	-8.3%
Lyon	25,857	25,425	432	1.7%
Murray	8,725	9,165	-440	-4.8%
Nobles	21,378	20,832	546	2.6%
Pipestone	9,596	9,895	-299	-3.0%
Redwood	16,059	16,815	-756	-4.5%
Renville	15,985	17,154	-1,169	-6.8%
Rock	9,687	9,721	-34	-0.3%
Yellow Medicine	10,438	11,080	-642	-5.8%
SW Region	154,843	160,018	-5,185	-3.2%
Minnesota	5,303,925	4,919,492	384,433	7.8%

encompasses some of the lowest populated counties in Minnesota; Murray is the 14th smallest county in the state, followed by Lac qui Parle as the 12th and Lincoln as the 8th smallest county in the state.

The 2011 population estimate of the 8,346 square mile planning area is 151,881 (Table 2). There are 338 cities and townships throughout the region, 106 cities – ranging in size from 12 people in the city of Kinbrae in Nobles County to 13,680 residents in the city of Marshall in Lyon County and 232 townships – ranging in size from 77 people in Mehurin Twp. (Lac qui Parle) and 79 people in Honner Twp. (Redwood) to 568 people in Lake Marshall Twp. (Lyon) and 555 people in Paxton Twp. (Redwood) respectively. There were three cities with more than 5,000 people in the region, and another 23 cities between 1,000 and 5,000 people. The next 17 cities in the region had between 500 and 999 people, meaning the remaining 63 cities in the region had fewer than 500 people, including 45 cities that had fewer than 250 people. Likewise, just two of the 232 townships in the region had more than 500 people, 41 between 250 and 499 people and 189 townships with less than 250 in population (Table 3).

While all the counties are rural in nature, Lyon and Nobles counties host micropolitan areas. Marshall, in Lyon County was the largest community in the region and gained 945 new residents from 2000 to 2010 for a total population of 13,680. The city of Worthington, in Nobles County, is the second largest city in the region with 12,764 people, and it gained the most people from 2000 to 2010, after adding 1,481 people. Appendix C identifies cities and townships in each county with their 2011 population.

Table 2: SWRSWC Planning Area Population by County 1900 – 2011 estimates.

Geography	2011 est	2010	2000	1990	1980	1970	1960	1950	1940	1930	1920	1910	1900
Cottonwood	11,682	11,687	12,167	12,694	14,854	14,887	16,166	15,763	16,163	14,782	14,570	12,651	12,069
Jackson	10,203	10,266	11,268	11,677	13,690	14,352	15,501	16,306	16,805	15,863	15,955	14,491	14,793
Lac Qui Parle	7,195	7,259	8,067	8,924	10,592	11,164	13,330	14,545	15,509	15,398	15,554	15,435	14,289
Lincoln	5,819	5,896	6,429	6,890	8,207	8,143	9,651	10,150	10,798	11,303	11,268	9,874	8,966
Lyon	25,951	25,857	25,425	24,789	25,207	24,273	22,655	22,253	21,569	19,326	18,837	15,722	14,591
Murray	8,640	8,725	9,165	9,660	11,507	12,508	14,743	14,801	15,060	13,902	13,631	11,755	11,911
Nobles	21,365	21,378	20,832	20,098	21,840	23,208	23,365	22,435	21,215	18,618	17,917	15,210	14,932
Pipestone	9,525	9,596	9,895	10,491	11,690	12,791	13,605	14,003	13,794	12,238	12,050	9,553	9,264
Redwood	15,986	16,059	16,815	17,254	19,341	20,024	21,718	22,127	22,290	20,620	20,908	18,425	17,261
Renville	15,540	15,730	17,154	17,673	20,401	21,139	23,249	23,954	24,625	23,645	23,634	23,123	23,693
Rock	9,644	9,687	9,721	9,806	10,703	11,346	11,864	11,278	10,933	10,962	10,965	10,222	9,668
Yellow Medicine	10,331	10,438	11,080	11,684	13,653	14,418	15,523	16,279	16,917	16,625	16,550	15,406	14,602
Planning Area	151,881	154,588	160,018	163,630	183,665	190,223	203,330	205,844	207,618	195,212	193,759	173,777	167,939

Source: Population of Counties by Decennial Census: 1900 to 1990; 2000 & 2010 Census; 2011 MN Demographers Office

Table 3: Number of Cities and Townships by County, Number of Cities and Townships in population categories by County (2010 Census)

	Number of:		Cities with a population:					Townships with a population:		
	Cities	Townships	>5,000	1,000-4,999	500-999	250-499	<250	500-1,000	250-4,999	<250
Cottonwood	7	18		2	1	1	2		3	15
Jackson	6	20		2	1		3		2	18
Lac qui Parle	7	22		2			5		1	21
Lincoln	5	15		1	3		1			15
Lyon	11	20	1	3	1	3	3	1	5	14
Murray	9	20		2		2	5		5	15
Nobles	11	20	1	1		5	4		7	13
Pipestone	9	12		2	1		6		4	8
Redwood	15	26	1		4	3	7	1	2	23
Renville	10	27		5	4	1	0		3	24
Rock	8	12		1	1	1	5		6	6
Yellow Medicine	9	21		2	1	2	4		3	18
Total	107	232	3	23	17	18	45	2	41	190

Source: US Census

In sum, about two-thirds of the region’s population (103,937 people) resides in cities, as compared to one-third of residents (47,944 people) who lived in townships (Table 4). Figure 2 provides a geographical representation of the distribution of the rural population in the 12 counties, and Figure 3 shows the distribution of population density by Census Tract in 2010.

Demographic Characteristics.

Southwest Minnesota’s population is older than the state’s population. Nearly one in five (18.7%) people in the region were 65 years and over in 2010, as compared to 12.9 percent statewide. Younger populations in Lyon and Nobles County kept the region more in line with the state.

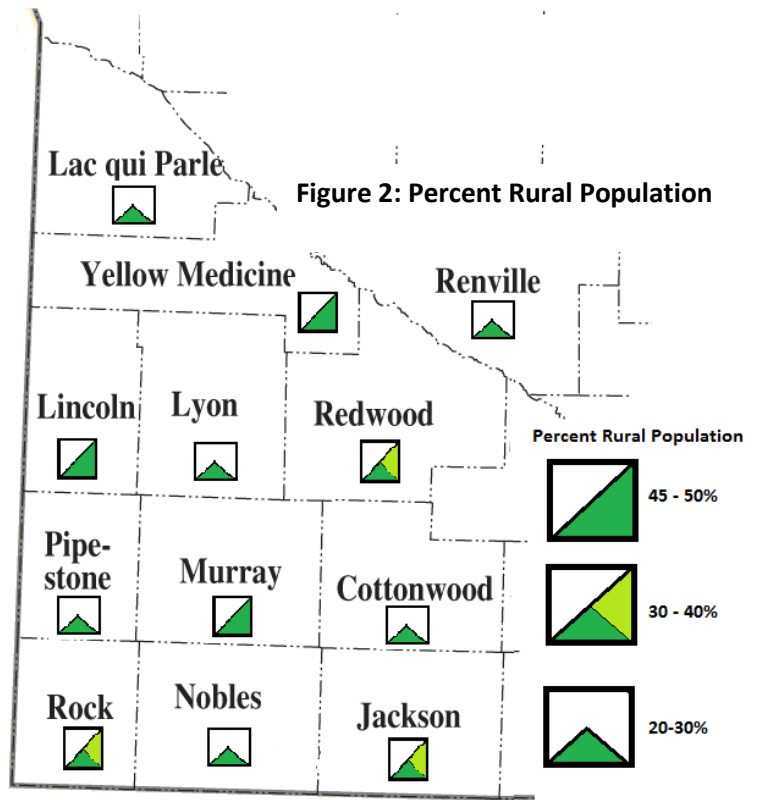
In contrast, 36,685 people in the region were under 18 years of age, accounting for just less than one in every four people in the region (24.0%), as compared to about 24% of both the Minnesota (24.2%) and United States (24.0%) populations. About 6.6 percent of the region’s population was under 5 years of age.

Surprisingly, the 5- to 14-year-old age group was the second largest age group in the region, with 20,045 people in 2010, accounting for 13.1% of the total population (Table 5).

The region has one 4-year university (Southwest Minnesota State University in Marshall) and six campuses of a 2-year community and technical college (Minnesota West Community & Technical College in Canby, Granite Falls,

Table 4: 2011 Population Estimates, Percent of City and Rural MSW Collection		% of 12 co	% living in city	% living in rural	(2010) persons/ sq mile
Cottonwood County	11,682	7.70%	70	30	18.3
Jackson County	10,203	6.70%	59.1	40.9	14.6
Lac qui Parle County	7,195	4.70%	70.1	29.9	9.5
Lincoln County	5,819	3.80%	54	46	11.0
Lyon County	25,951	17.10%	76	24	36.2
Murray County	8,640	5.70%	51.5	48.5	12.4
Nobles County	21,365	14.10%	77.5	22.5	29.9
Pipestone County	9,525	6.30%	71.7	28.3	20.6
Redwood County	15,986	10.50%	66.5	33.5	18.3
Renville County	15,540	10.20%	72.6	27.4	16.0
Rock County	9,644	6.30%	68.5	31.5	20.1
Yellow Medicine County	10,331	6.80%	52.9	47.1	13.8
Total	151,881		68.4	31.6	18.2

Source: Minnesota State Demographic Center, MnGeo: Minnesota Geospatial Information Office



2010 Census: Minnesota Profile

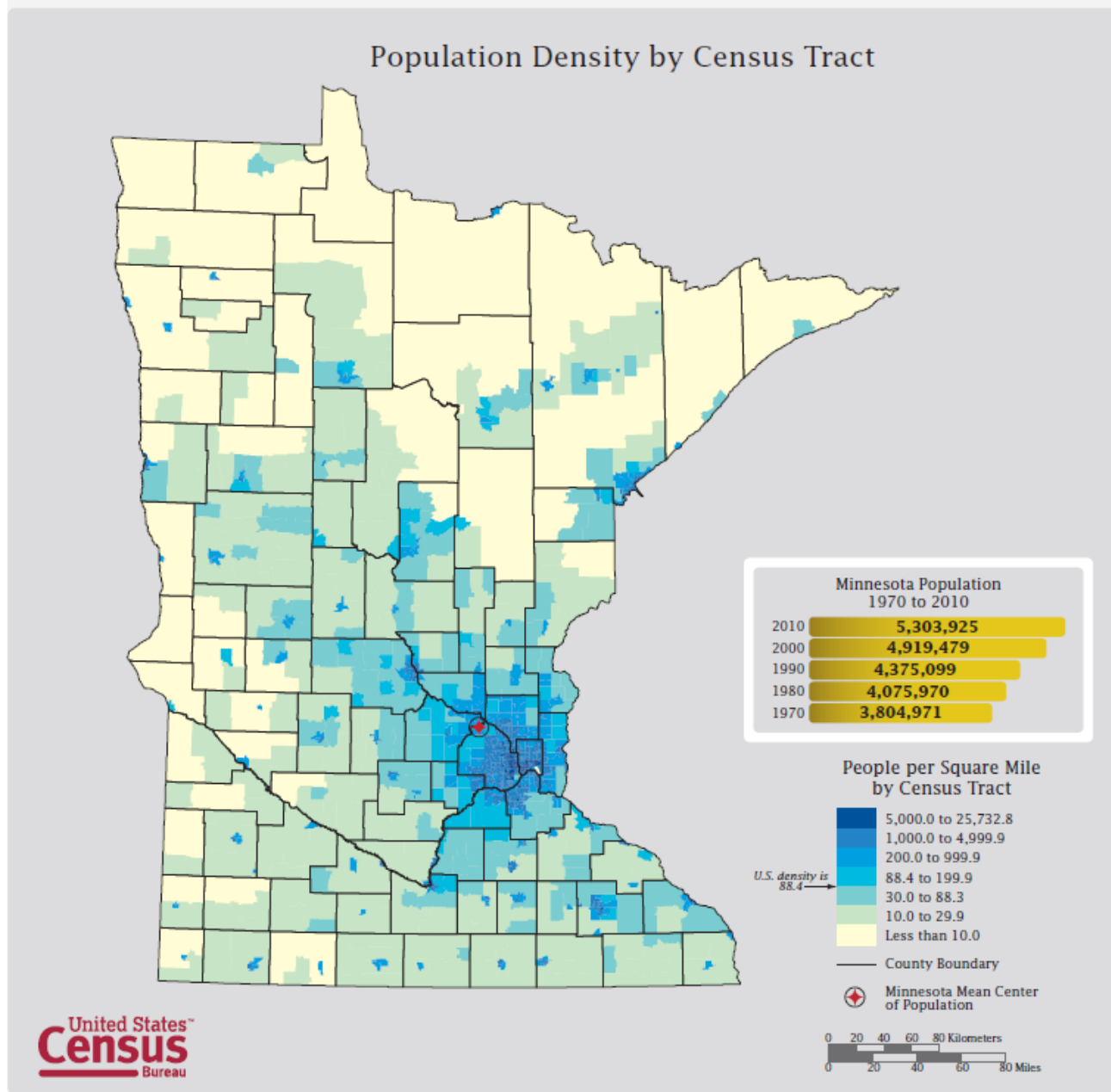


Figure 3: 2010 Population Density by Census Tract.

Jackson, Pipestone, Redwood Falls and Worthington) spread throughout the region, but the region had a smaller percentage of people in the 15- to 24-year-old age group. These young adults comprise 12.2% of the region’s population, as compared to 13.6 percent in the state. Migration patterns show that people in this age group are very mobile, often moving one place to get an education, and then another to get a job.

Table 5: 2010 Population by age and median age in Counties.

	Cotton-wood	Jackson	LQP	Lincoln	Lyon	Murray	Nobles	Pipe-stone	Redwood	Renville	Rock	Yellow Medicine	Region
Total Population	11,687	10,266	7,259	5,896	25,857	8,725	21,378	9,596	16,059	15,730	9,687	10,438	152,578
Under 5 years	703	610	377	384	1,872	524	1,697	660	1,076	902	683	660	10,148
5 to 9 years	801	629	412	367	1,686	509	1,458	663	1,116	975	713	641	9,970
10 to 14 years	770	654	446	349	1,667	542	1,413	640	1,123	1,084	673	714	10,075
15 to 19 years	782	670	423	310	2,045	531	1,491	639	1,047	1,016	641	693	10,288
20 to 24 years	515	474	246	240	2,465	345	1,358	438	725	694	389	523	8,412
25 to 29 years	558	533	317	278	1,868	395	1,434	533	848	842	504	615	8,725
30 to 34 years	572	523	322	323	1,547	434	1,234	461	777	779	549	519	8,040
35 to 39 years	594	557	324	297	1,415	381	1,225	525	831	787	558	511	8,005
40 to 44 years	674	605	370	314	1,425	498	1,279	533	946	941	505	614	8,704
45 to 49 years	797	736	531	389	1,753	602	1,385	708	1,174	1,193	673	745	10,686
50 to 54 years	875	873	655	442	1,838	719	1,563	736	1,173	1,378	713	861	11,826
55 to 59 years	833	774	633	430	1,591	704	1,345	639	1,093	1,205	658	755	10,660
60 to 64 years	731	584	477	329	1,166	590	1,076	520	966	889	593	556	8,477
65 to 69 years	594	463	391	331	907	496	862	403	777	767	448	496	6,935
70 to 74 years	495	421	360	311	698	415	700	378	696	621	349	429	5,873
75 to 79 years	459	397	313	286	636	375	668	366	535	573	329	363	5,300
80 to 84 years	432	341	318	218	588	319	521	337	517	487	327	319	4,724
85 to 89 years	301	271	212	179	415	208	392	248	356	354	247	249	3,432
90 years & over	201	151	132	119	275	138	277	169	283	243	135	175	2,298
< 18 years	2,791	2,320	1,534	1,316	6,265	1,934	5,483	2,391	4,017	3,656	2,503	2,475	36,685
18 to 64 years	6,414	5,902	3,999	3,136	16,073	4,840	12,475	5,304	8,878	9,029	5,349	5,932	87,331
65 years & over	2,482	2,044	1,726	1,444	3,519	1,951	3,420	1,901	3,164	3,045	1,835	2,031	28,562
Median age (yrs)	44.2	44.1	48.9	46.2	34.1	46.8	37.5	42.3	42.6	44.2	41.4	42.9	41.4

While the majority of the counties had larger older age groups, one county in the region had a younger median age than the state of Minnesota. In fact, Lyon County – thanks to the college – had the 8th youngest median age in the state at 34.1 years, while the state’s median age was 37.4 years in 2010. Nobles County was the next youngest in the region at 37.5 years. The rest of the counties in the region had median ages over 40, including Rock (41.4 years), Pipestone (42.3 years), Redwood (42.6 years), Yellow Medicine (42.9 years), Jackson (44.1 years), Cottonwood and Renville (44.2 years) ; as well as three counties with median ages over 45 years: Lincoln (46.2 years), Murray (46.8 years), and Lac qui Parle County (48.9 years). Lac qui Parle had the third oldest median age in the state, followed by Murray County with the tenth oldest median age. As in the rest of the state and the nation, the population has been aging throughout the region.

Population Projections for the next ten years and beyond. In a regional analysis for counties in Regional Development Commissions 6W and 8, the Minnesota Department of Employment and Economic Development (DEED) reported that “As life expectancies continue to increase and the Baby Boom generation continues to move through the population pyramid, the percentage of the population aged 65 years and over living in Southwest Minnesota is projected to reach almost 30 percent by the year 2035. Population projections from the Minnesota State Demographic Center expect the region’s aging trend to intensify in the future. Nearly 40,200 residents in Southwest Minnesota could be 65 years and over by 2025, and perhaps 44,830 people will be in the oldest age groups by 2035, making it easily the fastest growing age group in the twelve county region in the next 20 years. The expected gain of 12,740 senior citizens over the next two decades is nearly enough to make up for the loss of people in all of the other age groups; with the region expected to have essentially the same population in 2035 as it will have in 2015. In comparison, the state of Minnesota is projected to grow 12.9 percent from 2015 to 2035, an increase of over 700,000 people.”⁵ The dynamics of the projected aging population will have an impact on jobs and waste generated from households. The SWA’s have noted that recycling carts are a more user friendly means of moving recyclables to the curb by all ages and SWRSWC members have reported observations of elderly persons having difficulty lifting lids at the roll-off recycling bins.

Table 6 illustrates the most recent (October 16, 2012) population projection for Counties in the region through 2040. In the Plan planning frame (next ten years), the region will lose 3,764 residents. Every county in the region will lose population, with the exception of Lyon and Nobles Counties who will gain 672 and 126 in population respectively. Renville County is projected to lose the most residents (-1,103), followed by Jackson County (-667), Lac qui Parle (-521), Lincoln (-472) Redwood (-401), Yellow Medicine (-398), Cottonwood (-357), and Rock, Pipestone and Murray Counties projected to lose the fewest residents (-244, -227, -172 respectively).

Table 7 provides two scenarios for estimated households through 2020. The first scenario was directly from the Minnesota State Demographers Office and was produced in 2007; the second is a straight line projection based on 2000 and 2010 Census Household numbers. There was an overall regional difference of -.3% between the two percentage changes, however, in some counties there was a large variation in the number of households between the two projections. It was recommended by SWRSWC Staff, that the trend using the Census 2000 and 2010 Household counts be used to reflect the 2020 estimated households.

⁵ The DEED Analysis included Swift, Big Stone, and Chippewa counties, but did not include Renville County. However, the generalizations of the aging trend intensifying are similar in Renville County.

Table 6: SWRSWC Population and Projections by County, 2000-2040

Geography	2000	2010	2015	2020	2025	2030	2035	2040	Planning frame 2010-2020
Cottonwood	12,167	11,687	11,475	11,330	11,174	11,011	10,855	10,721	-357
Jackson	11,268	10,266	9,914	9,599	9,273	8,943	8,624	8,329	-667
Lac qui Parle	8,067	7,259	6,967	6,738	6,532	6,352	6,209	6,112	-521
Lincoln	6,429	5,896	5,642	5,424	5,195	4,957	4,721	4,491	-472
Lyon	25,425	25,857	26,193	26,529	26,768	26,912	26,998	27,060	672
Murray	9,165	8,725	8,585	8,553	8,548	8,570	8,632	8,746	-172
Nobles	20,832	21,378	21,348	21,504	21,579	21,577	21,527	21,459	126
Pipestone	9,895	9,596	9,415	9,352	9,301	9,264	9,255	9,284	-244
Redwood	16,815	16,059	15,823	15,658	15,471	15,268	15,068	14,892	-401
Renville	17,154	15,730	15,140	14,627	14,073	13,488	12,893	12,311	-1,103
Rock	9,721	9,687	9,530	9,460	9,356	9,220	9,065	8,906	-227
Yellow Medicine	11,080	10,438	10,179	10,040	9,921	9,827	9,771	9,767	-398
Region	158,018	152,578	150,211	148,814	147,191	145,389	143,618	142,078	-3,764

Minnesota State Demographic Center, October 16, 2012

Table 7: SWRSWC Household and Household Projections by County, 2000-2020

Total Households and Projections	Projected Minnesota households by 2005 to 2035, ⁶				Estimated 2020 Households based on 2000 to 2010 Household trend ⁷				
	2005 Estimate	Projected 2010	Projected 2020	% change 2010-20	2000 HH	2010 HH	2011 HH est	% change 2000 - 10	% change applied to 2010 for estimated 2020
Cottonwood	4,911	4,800	4,710	-2%	4,917	4,857	4,860	-1.2%	4,798
Jackson	4,730	4,730	4,870	3%	4,556	4,429	4,422	-2.8%	4,306
Lac qui Parle	3,221	2,960	2,760	-7%	3,316	3,155	3,145	-4.9%	3,002
Lincoln	2,535	2,450	2,380	-3%	2,653	2,574	2,552	-3.0%	2,497
Lyon	9,755	9,590	9,400	-2%	9,715	10,227	10,265	5.3%	10,766
Murray	3,737	3,690	3,710	1%	3,722	3,717	3,701	-0.1%	3,712
Nobles	8,073	8,060	8,260	2%	7,939	7,946	7,970	0.1%	7,953
Pipestone	4,042	3,860	3,720	-4%	4,069	4,054	4,038	-0.4%	4,039
Redwood	6,565	6,390	6,370	0%	6,674	6,580	6,579	-1.4%	6,487
Renville	6,825	6,830	7,010	3%	6,779	6,564	6,516	-3.2%	6,356
Rock County	3,857	3,770	3,700	-2%	3,843	3,918	3,915	2.0%	3,994
Yellow Medicine	4,330	4,030	3,920	-3%	4,439	4,292	4,260	-3.3%	4,150
Region	62,581	61,160	60,810	-3%	62,622	62,313	62,223	-3.3%	62,060

⁶ Minnesota State Demographic Center, August 2007⁷ Census 2000 and 2010, MN Demographic Center 2011 Household Estimate

Race and Diversity. While the total population was declining, Southwest Minnesota's population was becoming more diverse. The non-white population doubled from 2000 to 2010 in the Region and the white population has decreased over the last ten years. There are three race categories that have shown the largest increase from 2000 to 2010 are Black, and increase from 790 to 1764, American Indian from 1286 to 1648, and Asian which increased from 1879 to 3141 persons. Person of any race who are Hispanic or Latino also doubled in the region from 5478 to 10110 (Table 8). The largest numbers of persons in this category are in Nobles, Lyon and Renville Counties. In fact, at 22.5 percent, Nobles County had the highest percentage of Hispanic or Latino residents in the entire state.

The counties that show the greatest amount of diversity in actual numbers are Nobles and Lyon. This is due in part to the meat packing plants in Worthington (JBS) and Marshall (Turkey Valley Farms). Of significant impact to educational efforts are the percentage of population that speaks a language other than English at home (age 5+). Twenty-three percent of the population in Nobles County speaks a language other than English at home. Lyon and Cottonwood Counties also have a significant percentage of the population in this category.

Land Use Patterns. Table 9 illustrates the land use patterns in the planning area by county in acreage and by percentage. Due the nature of land use, very little changes over time. Human activities on the land include cultivated lands (farming) at 86.1% of the land use, Hay / Pasture / grassland at 7.7 %; Urban and rural development at 2.0% of the land use and Mining at 0.1 % of land use. Land use activities that are more natural in nature are forest at 2.4%, water at 1.2% bog / marsh / fen at 0.5% and brush land at 0.1% of land use in the region, and account for very little of the land use at 4.2 percent regionally. When combined, cultivated land and hay/pasture/grassland account for a regional percentage of 93.8% of the land use and in each county accounts for greater than 90% of the land use. The remainder of the each of the six land use classification categories account for less than 3% of the physical area in each of the counties.

Employment and Wages / Local Economic Conditions. Table 10 presents total employment and wages for all industries in the 12 county planning region. The highest average annual employments are in the counties with the regional centers (Lyon and Nobles), the lowest are in Lincoln and Lac qui Parle Counties. The total annual wages are also highest in Lyon and Nobles Counties with the lowest in Lincoln County. The average wage per week reflects some differences, while Lyon County has the highest average wage per week; it is followed by Renville and Nobles counties. The lowest average wage per week is in Pipestone County (\$541), with the employment in Lincoln County earning a little more at \$546 per week. Appendix C details the total employment and wages by county by NAICS category.

Table 8: Race and Diversity, 2010 and 2000

2010	total	white	black	Am Indian	Asian	Hawaiian / Pacific Islander	Hispanic or Latino (of any race)	% Non white	Language other than English at home*
Cottonwood	11687	10773	87	27	317	17	720	7.8%	8.70%
Jackson	10266	9830	47	24	140	1	277	4.2%	3.90%
Lac qui Parle	7259	7087	17	17	29	3	108	2.4%	3.10%
Lincoln	5896	5777	8	9	14	0	72	2.0%	3.20%
Lyon	25857	23360	587	114	679	7	1541	9.7%	9.10%
Murray	8725	8435	25	11	78	2	242	3.3%	3.10%
Nobles	21378	16206	743	111	1168	10	4820	24.2%	23.20%
Pipestone	9596	8975	56	100	69	0	355	6.5%	4.70%
Redwood	16059	14305	75	796	507	2	335	10.9%	5.60%
Renville	15730	15014	44	91	54	6	1046	4.6%	6.00%
Rock	9687	9365	59	34	53	1	197	3.3%	4.30%
Yellow Medicine	10438	9806	16	314	33	6	397	6.1%	4.40%
Region	152578	135933	1764	1648	3141	55	10110	10.9%	

2000									
Cottonwood	12167	11587	41	28	198	10	267	4.8%	
Jackson	11268	10938	10	13	155	0	210	2.9%	
Lac qui Parle	8067	7974	13	18	26	0	21	1.2%	
Lincoln	6429	6353	3	18	13	0	55	1.2%	
Lyon	25425	23792	378	80	425	5	1009	6.4%	
Murray	9165	9013	9	20	19	2	135	1.7%	
Nobles	20832	18019	223	64	830	15	2325	13.5%	
Pipestone	9895	9566	17	146	46	2	69	3.3%	
Redwood	16815	15696	22	544	53	11	192	6.7%	
Renville	17154	16419	10	87	35	3	876	4.3%	
Rock	9721	9456	52	42	60	2	124	2.7%	
Yellow Medicine	11080	10647	12	226	19	1	195	3.9%	
Region	158018	149460	790	1286	1879	51	5478	5.4%	

Source: US Census

Table 9: SWRSWC area: Minnesota Land Use and Cover Statistics

Land Use and Cover Statistics - Acreage

Description / County	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipestone	Redwood	Renville	Rock	Yellow Medicine	Region
Urban & rural development	8,522	8,998	8,232	6,011	11,941	8,608	11,466	6,500	10,767	11,668	6,732	8,349	107,794
Cultivated land	361,329	397,886	411,038	278,762	388,404	389,158	409,605	243,061	511,215	575,499	261,844	424,547	4,652,348
Hay/pasture/grassland	28,318	27,132	49,356	46,990	40,572	41,574	30,492	44,473	21,078	16,182	35,800	32,852	414,819
Brush land	239	265	1,040	245	364	275	148	101	524	861	206	664	4,932
Forested	8,416	10,332	13,328	7,940	11,899	7,994	5,000	3,550	17,543	21,864	3,439	15,749	127,054
Water	5,996	11,336	8,387	8,757	5,856	9,786	4,851	492	1,603	3,756	777	3,921	65,518
Bog/marsh/fen	2,014	4,146	6,690	2,413	2,774	2,994	926	170	1,196	1,470	121	2,308	27,222
Mining	202	159	253	170	271	270	154	171	247	430	230	272	2,829
Total	415,036	460,254	498,324	351,288	462,081	460,659	462,642	298,518	564,173	631,730	309,149	488,662	5,402,516

Land Use and Cover Statistics - acreage percentage

Description / County	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipestone	Redwood	Renville	Rock	Yellow Medicine	Region
Urban & rural development	2.1	2	1.7	1.7	2.6	1.9	2.5	2.2	1.9	1.8	2.2	1.7	2.0
Cultivated land	87.1	86.4	82.5	79.4	84	84.5	88.5	81.4	90.6	91.1	84.7	86.9	86.1
Hay/pasture/grassland	6.8	5.9	9.9	13.4	8.8	9	6.6	14.9	3.7	2.6	11.6	6.7	7.7
Brush land	0.1	0.1	0.2	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1
Forested	2	2.2	2.7	2.3	2.6	1.7	1.1	1.2	3.1	3.5	1.1	3.2	2.4
Water	1.4	2.5	1.7	2.5	1.3	2.1	1	0.2	0.3	0.6	0.3	0.8	1.2
Bog/marsh/fen	0.5	0.9	1.3	0.7	0.6	0.6	0.2	0.1	0.2	0.2	0	0.5	0.5
Mining	0	0	0.1	0	0.1	0.1	0	0.1	0	0.1	0.1	0.1	0.1
Total	100	100	100	100	100	100	100	100	100	100	100	100	

Source: <http://www.lmic.state.mn.us>

Table 10: Total Employment and Wages, All Industries (2011)

County	Average Annual Employment	Average establishments	Total Annual Wages	Average wage per week
Cottonwood	5135	395	\$157,160,828	\$589
Jackson	5246	351	\$166,902,195	\$611
Lac qui Parle	2421	230	\$75,834,425	\$602
Lincoln	1719	233	\$48,840,921	\$546
Lyon	14438	848	\$512,561,460	\$682
Murray	2909	328	\$88,180,266	\$583
Nobles	10226	653	\$342,634,829	\$644
Pipestone	4199	367	\$118,277,799	\$541
Redwood	6424	563	\$194,393,494	\$581
Renville	5429	617	\$189,257,159	\$668
Rock	3177	288	\$98,274,865	\$594
Yellow Medicine	4260	357	\$139,307,806	\$628

Minnesota DEED website: <http://www.positivelyminnesota.com>

Forecasts of future employment growth are not available by county for the region. However, the Minnesota Department of Employment and Economic Development predicts for the Southwest Region, ⁸from 2009 to 2019 are predicted to have the slowest job growth. DEED predicts that since Southwest Minnesota is the most agricultural dependent region in Minnesota, with jobs accounting for 8.4 percent of all employment that the agricultural jobs will slip to 7.9 percent of the jobs in 2019. Though wages are lower in many areas, one occupational group (farming, fishing, and forestry occupations) had higher wages in Southwest Minnesota than in the Twin Cities and two other occupational groups are competitive in wages including education, training and library occupations and protective service occupations.

Median Household Income. All counties in Southwest Minnesota have a lower median household income than Minnesota Median household Income of \$57,243. Yellow Medicine County is the highest of all the counties at \$50,288 and Cottonwood County has the lowest at \$40,292. Nobles, Lyon, Yellow Medicine, Cottonwood, Renville, and Redwood counties have a higher percentage of persons below the poverty level than the state percentage of 10.6. Nobles County stands out as having the highest at 18%. Jackson, Lincoln, Lac qui Parle, Rock and Pipestone are below the state percentage (Table 11).

⁸ The Southwest DEED Regions includes all but Renville County and has an additional three counties: Swift, Chippewa, and Big Stone.

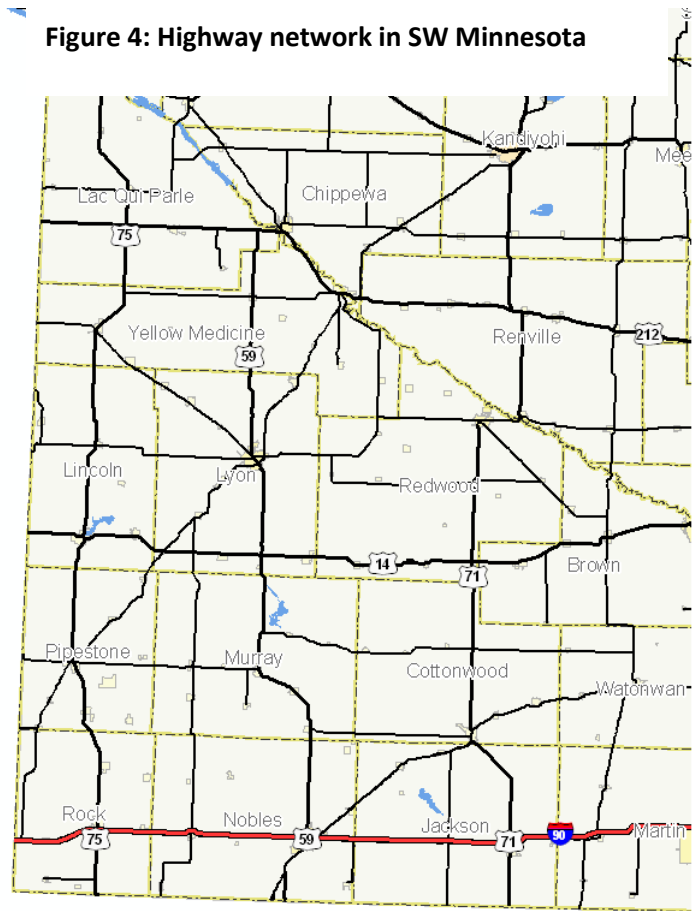
Table 11: Median Household Income and Percentage of persons below poverty level.

County	Median Household Income (2006-2010)	Person below the poverty level % (2006-2010)	2011 estimated number of households
Cottonwood	40,292	10.9	4,860
Jackson	46,869	9.1	4,422
Lac qui Parle	45,550	9.3	3,145
Lincoln	44,672	9.2	2,552
Lyon	46,872	12.2	10,265
Murray	45,657	9.3	3,701
Nobles	43,040	18.0	7,970
Pipestone	40,589	9.9	4,038
Redwood	44,181	10.7	6,579
Renville	47,623	10.8	6,516
Rock	45,411	9.5	3,915
Yellow Medicine	50,288	12.7	4,260
Minnesota	57,243	10.6	62,223

Source: US Census, QuickFacts

Transportation network. The twelve counties are served by a grid of east west and north south state / federal highways, with two diagonal southwest to northeast highways, with access to a state highway usually less than 20 miles (Figure 4). The majority of urban areas are located along state highways. The County State Aid system which normally supports both high local traffic volumes supplements access to the state system and serves communities not along state roads. Paved road spacing in the region is about 6 miles (ranges from 3 to 7.5 miles) and spacing of ten ton routes ranges between 3 to 15 miles⁹. The SWRSWC is served by three class III Railroads: Burlington Northern Santa Fe, Union Pacific, and Canadian Pacific; and three Class III railroads: Minnesota southern, Minnesota Prairie Line, and Twin Cities and Western. Access to the transportation network by roads as well as the railway network that can support heavy weight traffic plays an integral part of both business location (MSW generation and destination locations, recycling opportunities, employment, economic development) as well as the decisions made about how solid waste services are selected.

Figure 4: Highway network in SW Minnesota



⁹ Local road information was derived from a survey for the regions county engineers.

Summary of demographic, geographical, and regional constraints and opportunities that have impacted or may impact the existing or proposed system.

The regional population peaked in 1940 at 207,618 and has been decreasing to the current 2010 Census count of 151,881. About 70% of the regional population resides in communities and 30% in rural areas. The 8,346 square mile region supports an average of 18.2 persons per square mile whose median age is 41.4 and ranges from 34.1 in Lyon County to 48.9 in Lac qui Parle County.

Over the next ten years, the 12 county region is predicted to experience an overall population loss of nearly 3,800 people. Two counties (Lyon and Nobles) are predicted to increase their population by a total of nearly 800 people. Renville County is predicted to lose the largest number of people (1,103) over the next ten years.¹⁰

The region has been experiencing an increase of race and cultural diversity over the past ten years, particularly in Nobles County where in 2010, 23.2% of the population spoke a language other than English at home. The change in population diversity can mean a change in MSW generated (type or volume) as well as conveying information about MSW disposal, reuse, recycling and composting. Counties that have experienced increased diversity will need to tailor their solid waste programs to ensure maximum understanding and participation.

The largest geographic land use in the region are Agricultural Activities (cultivated land, pasture, and grazing) and not surprisingly have been identified as the most agriculturally dependent area of Minnesota by DEED. It is predicted that over the next ten years there will be slow job growth and the percent of agricultural jobs will also decrease. The wages in the farming, fishing, and forestry occupations have higher wages than in the metro area and education, training, and library occupations as well as protective service occupations have competitive wages.

The highest wages tend to be in the counties with regional centers (Lyon and Nobles counties). All of the planning area counties have a median income lower than the Minnesota median household income of \$57,243.

Population density and hauling distances for solid waste have had and will likely continue to influence the development of solid waste management systems due largely in part to the economics of volumes of materials needed to make hauling fiscally feasible. Transfer stations or collection points will likely continue to be utilized in less densely populated areas of the planning area. Location and distance of services and reverse haul are economic drivers that influence solid waste management flows and marketing.

¹⁰ These projections were produced by the Minnesota State Demographic Center. Because of the very large population loss projected for Renville County, an explanation was requested: Megan Robertson (ADM) "Renville County has been consistently losing a significant amount of its population for some time now. Our county-level projections were created using a series of regression lines of historical trends from, in this case, 1970. Since 1970, Renville County has lost almost 6,000 people and we have no indication that the trend is going to change in the future. We used the most conservative model for this county (meaning that the least amount of people were lost), but that the loss in population is still projected to continue into the foreseeable future."

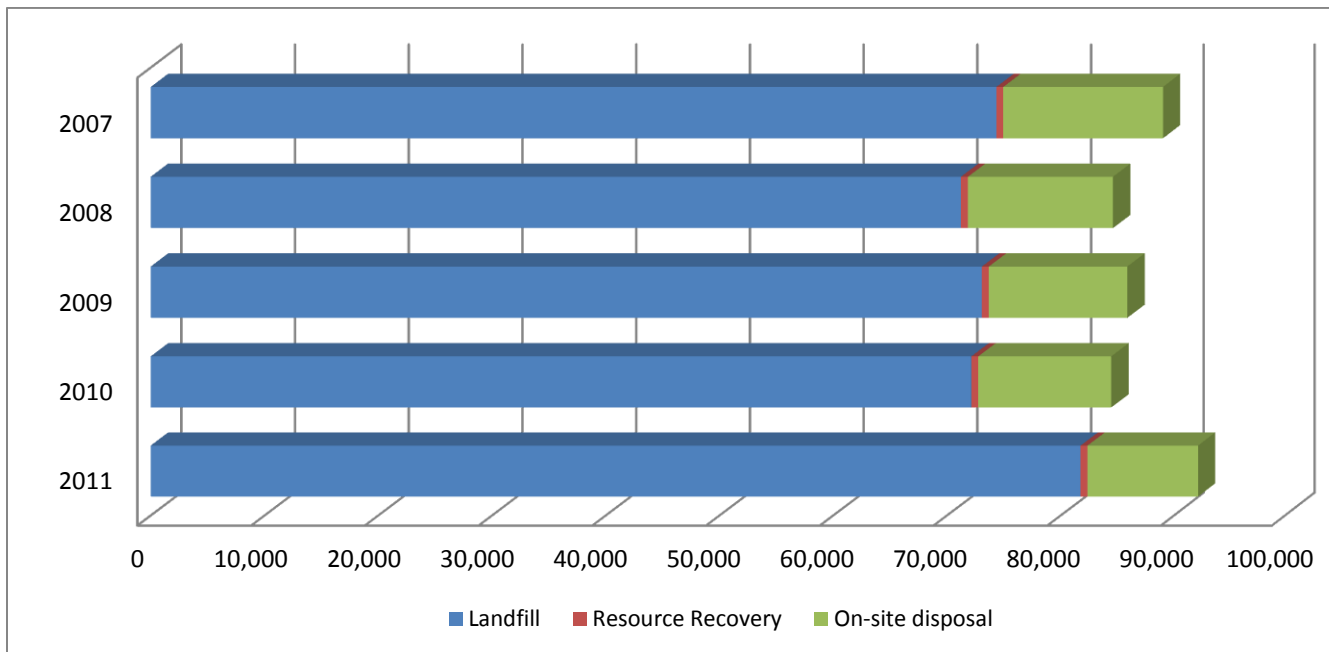
II. b Solid Waste Collection and Generation

Solid Waste Generated Annually. Regionally, the total annual volume of MSW collected and managed at Landfills, resource recovery and on-site had been decreasing from 2007 to 2010 but increased dramatically in 2011 (Table 12). In breaking this out further, waste to the landfill also decreased from 2007 to 2010 but increased in 2011 (Table 12 and Figure 5). Resource recovery disposal maintained the same level over the past five years and on-site disposal has decreased in volumes. Explanations for the increase in total MSW in 2011 may reflect a better economy.

Table 12: SWRSWC Annual MSW Landfilled, processed for resource recovery, and on-site disposal (tons) 2007-2011

	Landfill	Resource Recovery	On-site disposal	Total
2011	81,761	605	11,086	93,452
2010	72,163	606	11,698	84,467
2009	73,082	608	12,177	85,867
2008	71,244	617	12,759	84,620
2007	74,362	603	14,067	89,032

Figure 5: SWRSWC MSW by Disposal Type 2007 to 2011



Estimated percentage of city and rural residents with MSW collection and estimated percent of MSW disposed of on-site.

The estimated percent of city and rural residents with MSW collection is identified in Table 13. Communities have a higher percentage rate of collection service. Arrangements for solid waste collection range from the hauler working directly with the resident to the city contracting with the hauler for part of all of the services. The estimated percent of city residents with service in the SWRSWC region is 99%, but ranges by county from 90% to 100%. In rural areas there are often fewer residents taking advantage of a collection service, often using self-haul or on-site disposal (burn / bury). The estimated percentage of rural residents who use collection service ranges from 11.9% (with no self-haul counted) to 89% (which includes estimated self-haul).

Solid waste collection and disposal rate structure, including the current range of residential and commercial / industrial solid waste collection rates.

Collection by MSW Haulers. Table 14 identifies twenty MSW haulers in the SWRSWC Service area and the counties where they provide service. One provider (Waste Management) provides collection in eight of the SWRSWC Counties, Waste Connections / Schaaps provides service in six of the member counties, South West Sanitation and Hometown Sanitation service five counties, Olsen Sanitation four counties, Van Dyke and West Central Sanitation serves three counties, and Denny's Sanitation and Kettering provide service in two counties. The remaining twelve haulers provide service within one county. The number of MSW haulers per county varies from 2 haulers in Lincoln, Lac qui Parle and Yellow Medicine counties to nine haulers in Rock County.

Table 15 outlines the MSW Hauler License / fee structure in each of the SWRSWC Counties. Three counties (Lac qui Parle, Murray, Renville) do not license the MSW haulers.¹¹ However in Renville County, by ordinance the communities are responsible for waste collection, hauling and disposal to the Renville County Landfill. The cities and townships in the SWRSWC area do not license haulers. Lincoln County requires a \$75 license and Rock County requires a \$75 license; five counties require a \$50 fee with other requirements such as \$10-\$25 per truck, an inspection certificate. Cottonwood County has a \$5 application and a \$2 per truck fee.

The SWRSWC will promote a uniform solid waste permitting and hauler licensing to reduce the confusion among service providers. A uniform license is likely to include an application with contact information, proof of liability insurance, verification of DOT Trucks, and identification of where waste is disposed. The SWRSWC and member counties will research methods to obtain tonnages or estimated tonnages from communities that contract with haulers.

Table 16 represents the disposal fees at the disposal facilities. The fees range from \$45 per ton to \$53.35 per ton at the Minnesota Landfills, \$56 per ton at the Iowa landfill and \$80 per ton at the Prairieland Resource Recovery Facility.¹²

¹¹ Minnesota Statute 115A.93, subdivision 1 requires counties to license all haulers.

¹² All landfill fees identified are before tax.

Table 13: Percent of residents with solid waste collection service and on-site disposal

	on-site disposal (tons)	% waste disposed of on-site	% city residents w waste collection	% rural residents w waste collection	Comments
Cottonwood	1006	7.5%	95%	40%	
Jackson	840	7.2%	95%	51%	An estimated 80% of the population have collection
Lac qui Parle	1,399	19.1%	100%	11.9%	Does not reflect self-haul or use of recycling trailer
Lincoln	414	12.3%	100%	50%	Remainder of rural self-haul, burn, bury. There are 9 rural recycling drop off sites with dumpsters for MSW collection
Lyon	730	2.0%	99%	51%	% in rural also includes self-haul to facility, remainder burn, bury
Murray	756	11.9%	90%	47.5%	% in rural also includes self-haul to facility, remainder burn, bury
Nobles	693	3.0%	100%	55%	% in rural also includes self-haul to facility, remainder burn, bury
Pipestone	1,196	12.4%	100%	52%	Remainder self-haul, burn or bury
Redwood	732	4.3%	100%	89%	20% of RC population has access to the twp. recycling/MSW collection sites. It is estimated that about 69% of the population utilizes organized collection services. Four twp. sites have a 30 yd roll off recycling container with 1-2 six yd dumpsters for cardboard, & dumpsters of various sizes for MSW. There are 2 twp. sites with various sized dumpsters for MSW and NO RECYCLING. There are 7 twp. sites with a 30 yd roll off recycling container, 1-2 six yd dumpsters for cardboard, and NO MSW collection
Renville	1,957	14.6%	100%	28%	An Estimated 1100 people self-haul to the landfill, about ½ from rural and ½ city and is included in the percentages
Rock	420	6.5%	99%	75%	% in rural also includes self-haul to facility, remainder burn, bury
Yellow Medicine	944	9.8%	100%	40%	
Region	11,086	6.2%	99%	51%	

Source: County goal volume tables, history and summary tabs; County Solid Waste Administrators

Table 14: Waste Haulers in the SWRSC area (2012)

Waste Hauler	# of counties served	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipe-stone	Red-wood	Ren-ville	Rock	Yellow Medicine
City of Luverne 305 E Luverne St, PO Box 659 Luverne, MN 56156 (507) 449-2388	1											X	
City of Pipestone 119 2nd Ave SW Pipestone MN 56164 507-825-3324	1								X				
Braun & Borth Sanitation 809 Water street SW Sleepy eye, MN 56085 (507) 794-7956	1									X			
Denny's Sanitation 213 Harding Ave Rock Rapids, IA 51246 (712) 472-2293	2							X				X	
Garbage n' More 48036 258 th St Brandon, SD 57005 (605) 582-6916	1											X	
Hometown Sanitation 1615 1st Ave N Windom, MN 56101 (507) 832-8946	3	X	X							X			
John Clobes PO Box 57 Fairfax, MN 55332 (507) 426-8362	1										X		
Ketterling 401 South Cedar St Luverne, MN 56156 (507)-283-2863	2							X				X	
Marv's PO Box 733 Brandon, MN 57005 (605) 582-6766	1											X	

Table 14: (cont.) Waste Haulers in the SWRSWC area (2012)

Waste Hauler	# of counties served	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipe-stone	Red-wood	Ren-ville	Rock	Yellow Medicine
Mattheisen Disposal 126 20th Avenue NE Benson, MN 56215-1344 (320) 843-2120	1			X									
Olson Sanitation 175 7th St Dawson, MN 56232 (507)-223-7294	4			X		X				X			X
Renville-Sibley Sanitation 1238 Adams Avenue Gibbon, MN 5533 507.834.6168	1									X			
Scott's Dumpsters, LLC PO Box 944 Luverne, MN 56156 507-828-1032	1											X	
South West Sanitation 110 N 11th St Marshall, MN 56258 (877)-798-7274	5				X	X	X		X	X			
Steve Clobes PO Box 282 Fairfax, MN 55332 (507) 426-7300	1										X		
Town and Country 809 N 2 nd Avenue E Rock Rapids, IA 51246 (712) 472-2493	1											X	
Van Dyke 102 Mill Street W Edgerton, MN 56128 (507)-442-7241	3						X		X			X	
Waste Connections/Schaaps PO Box 698, 27008 US Hwy.#59 Worthington, MN 56187	6	X	X				X	X	X			X	

Table 14: (cont.) Waste Haulers in the SWRSC area (2012)

Waste Hauler	# of counties served	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipe-stone	Red-wood	Ren-ville	Rock	Yellow Medicine
Waste Management PO Box 336 Mankato, MN 56002 (866) 729-6476	8	X	X		X	X		X	X	X	X		
West Central Sanitation 4089 Abbott Dr, PO Box 796 Willmar, MN 56258 (320) 235-7630	3									X	X		X
Haulers per county		3	3	2	2	3	3	4	5	7	4	9	2

Table 15: MSW Hauler License and Fees required by county

	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipestone	Redwood	Renville	Rock	Yellow Medicine
Waste Hauler License	\$5 per application, \$2 per vehicle	\$50 per truck	None ¹³	\$75 and proof of insurance	\$50 plus \$25 per truck	None ¹⁴	\$50 per business + \$10 per truck	No fee, copy of hauler insurance which validates annual license ¹⁵	\$50 per truck, includes free truck inspection and certificate	None ¹⁶	\$75	\$50 plus \$25 per truck

¹³ See the Ordinance section of this Plan for how Lac qui Parle County plans to address the state requirement.

¹⁴ Murray County legal counsel as advised the County Board to not license haulers because the Solid Waste Ordinance requires the license to designate the disposal destination. This will be further addressed in the Ordinance section of this Plan.

¹⁵ The County licenses haulers by requiring a certificate of insurance and the hauler is added to the county list of haulers on an annual basis.

¹⁶ See the Ordinance section of this Plan for how Renville County will address the state requirement for Waste Haulers to be licensed. All cities in Renville County contract with haulers and in the contracts, the waste is designated to be delivered to the Renville County Landfill.

Table 16: Disposal Facility Fees ¹⁷

	Cottonwood LF	Lyon Regional LF	Nobles LF	Renville LF
SOLID WASTE	\$53.31 / ton plus tax, self-haul rounded to nearest \$0.05 (minimum \$10) ¹⁸	\$45 / ton + tax, minimum charge of \$6.44 up to the first 240 pounds.	\$50 / ton + tax	\$50 / ton + tax
DEMOLITION WASTE	\$19.40 / ton, + tax self-haul rounded to nearest \$0.05 minimum \$2 up to 180 lbs	\$22.00 / ton + tax , minimum charge of \$6.60 up to the first 550 lbs	\$9 / yard + 0.60 / yd tax	\$25 / ton + tax
APPLIANCES. Price / appliance	\$10	\$ 15.00	\$22	\$10
TIRES Per weight or individual tire prices	\$0.10 / pound or Individual tire prices” \$ 2.00 car, \$4.00 tractor / truck	\$ 175.00 per ton, Car and light Truck: \$ 2.00 Car tire with rim: \$ 8.00 Truck: \$ 6.00 Tractor: \$ 12 - \$ 35 (dep. on size)	\$5 car \$10 truck	\$5 car \$10 truck \$25 tractor
RESIDENTIAL ELECTRONICS	\$10 CPU’s, monitors, scanners, desktop copiers, FAX machines; \$12.50 medium copiers \$45 commercial FAX/Copiers / power supplies TV’s \$10 < 19” \$13.75 > 19” \$17.50 console	Computer (CPU) including computer mouse and keyboard: \$ 1.00 (price is valid for both residents and businesses) \$ 5.00 each for any of the following items Cathode Ray Tube (CRT) including Televisions, Computer monitors, and laptop screens/ computers. Printer, Scanner, copier, DVD, VHS, etc Televisions: \$ 17.00 each Computer CRTs (monitors): \$ 10.00 each All other electronic equipment \$ 10.00 each	\$22 per item	\$10 / item
Brush	\$2 for ½ to ¾ ton pick up \$3 for 1 ton pick up \$4 1.5 ton pickup \$10 for 2 ton trucks & larger		accepted	

¹⁷ Dickenson County, IA Landfill Solid Waste Tipping Fee is \$56 / ton+ taxes and surcharges = approx. 72.00/ton
 Prairieland Resource Recovery Facility Tipping Fee is \$80 per ton for out of county waste
 McLeod County Landfill Tipping fee is \$45 / ton plus tax

¹⁸ With tax, the Cottonwood Co disposal is \$69.07 / ton.

Residential Waste Rates. Table 17 represents the residential waste collection in the communities / townships in the planning area. The residential waste collection/disposal costs vary by community and hauler and pick up frequency for residential MSW in all counties was weekly. It appears that all the residential waste rates are volume based and the cost per yard is at the lowest when there are bag rates, thus encouraging recycling to keep disposal costs down. However, bag rates and rates for the totes include different charges. Residents using bags are charged a monthly drive by fee and bag fee but residents with totes have the pickup fee included in the cost of the tote. The result is a higher overall cost for the use of bags. Bags are an individual community option as a service to their residents. The SWRSWC and member counties will investigate use of bag or totes as a means of increasing recycling or reducing MSW and make recommendation to communities to best manage MSW generation.

By calculating gallons to cubic yards¹⁹ a comparison of per cubic yard costs was developed to compare pricing and volumes (Table 18). For bags, the cost per yard for waste disposal increases as the bag size range increases; 15-16 gallon bags range in disposal cost of \$0.09 to \$0.13; 20 gallon bags at \$0.20; and 30 to 40 gallon bags from \$0.30 to \$0.42. Adding drive by fees significantly increases the cost for waste disposal for residents using bags, see footnote for an example.²⁰

Charges for tote volumes ranges from: \$1.51 to \$1.80 for a 32 gallon tote; \$1.33 to \$2.90 for the 35 gallon tote, a common size in most counties; \$5.20 for a 60 gallon tote; 64-65 gallon totes ranged from \$3.60 to \$6.51; a 90 gallon tote was \$12.90; and the 95-96 gallon tote was \$6.60 to \$13.33.

Users of totes are not charged an additional transportation fee, the fee for pick up includes transportation, thus making the larger volume tote less expensive to use than bags. One explanation for the increased cost for waste collection / disposal service is less for the totes than for bags is the tote can be mechanically loaded, while the bags require manually loading the truck.

There is MSW collection in all municipalities in the SWRSWC planning area. MSW collection service in the municipalities of the SWRSWC planning area is accomplished through several scenarios. Most municipalities contract with haulers to provide service for residents and charge for the service through a utility bill but two of the communities are the MSW haulers (cities of Pipestone and Luverne). There are also municipalities where a resident contracts directly with the hauler. In some cases, there is a choice by a resident to select MSW collection service through a municipal contract with the hauler or by contracting the hauler directly. The counties of Redwood and Lincoln have rural garbage collection programs as well.

Commercial Solid Waste Rates. Table 19 represents the residential and commercial waste collection in the communities / townships in the planning area. Per cubic yard commercial waste costs varied by county and in some cases by volume or weight. Some counties reported the same cost for disposal for any size dumpster, while others reported various costs of containers. Renville County reported that for any size dumpster; the cost was \$0.048 per pound. The regional ranges varied drastically from \$3 per cubic yard to \$53 per cubic yard.

¹⁹ 1 gallon [US dry] = 0.005761370497120822 cubic yard

²⁰ The City of Currie charges \$7 per month for users of bags and bags cost \$1.75 for a 30 gallon bag. If a bag is placed on the curb weekly, the cost for monthly disposal is \$14 compared to a 35 gallon tote for \$10.50.

Table 17: Residential Solid Waste Rate Ranges for containers by County²¹

County	Bags & odd size totes	35 gal tote	64/65 gal tote	95/96 gal tote
Cottonwood		\$12.00	\$14.00	\$17.00
Jackson		\$6.64 to \$9.00	\$9.73 to \$12.58	\$13.95 to \$17.56
Lac qui Parle	Rates are set by private hauler	\$14.00 to \$14.50	\$16.00 to \$17.00	\$17.50 to \$19.00
Lincoln ²²		\$9.50 to \$12.10	\$11.50 to \$17.60	\$13.50 – \$23.10
Lyon	\$8.41-\$10.00 (32 gal tote)		\$11.00 - \$12.11	\$12.00 - \$ 13.75
Murray	15 gal \$15.00/ 10 pk 30 gal \$17.50 / 10 pk	\$10.50	\$12.50	\$15.75.
Nobles		\$10.50	\$12.50	\$15.75
Pipestone ²³	15 gal \$10.98 /10 pk 33 gal \$21.98 /10 pk	\$12.00	\$13.50	\$15.75
Redwood ²⁴	20 gal \$16.46/10 pk	\$9.43 to \$11.75	\$11.75 to \$15.75	\$24.23 to \$18.75
Renville ²⁵	16 gal \$13.70 /10 pk 40 gal \$14.00 / 10 pk	\$11.50	\$14.00	\$16.50
Rock	\$14.85 (60 gal tote) \$24.81 (90 gal tote)		\$12.50 to 15	
Yellow Medicine		\$8.23 – \$13.44	\$15.00 - \$16.28	\$17.00 - \$18.68

Table 18: MSW disposal rates calculated by cubic yard, by container size.

County	Bags & odd size totes	35 gal tote	64/65 gal tote	95/96 gal tote
Cottonwood		\$2.40	\$5.18	\$9.35
Jackson		\$1.33 to \$1.80	\$3.60 to \$4.65	\$7.67 to \$9.66
Lac qui Parle		\$2.80 to \$2.90	\$5.92 to \$6.29	\$9.63 to \$10.45
Lincoln		\$1.90 to \$2.42	\$4.26 to \$6.51	\$7.43 – \$12.71
Lyon	\$1.51 - \$1.80 (32 gal)		\$4.07 - \$4.48	\$6.60 –\$7.56
Murray ²⁶	15 gal \$0.13 & 30 gal \$0.30	\$2.10	\$4.43	\$8.66
Nobles		\$2.10	\$4.43	\$8.66
Pipestone	15 gal \$0.09 & 33 gal \$.42	\$2.40	\$5.00	\$8.66
Redwood	20 gal \$.20	\$1.89 to \$2.35	\$4.35 to \$5.83	\$13.33 to \$10.31
Renville	16 gal \$.13 & 40 gal \$.32	\$2.30	\$5.18	\$9.08
Rock	\$5.20 (60 gal) & \$12.90 (90 gal)		\$4.63 to 5.55	
Yellow Medicine		\$1.65 - \$2.69	\$5.55 - \$6.02	\$9.35 - \$10.27

²¹ Waste fees for totes are monthly.

²² Lincoln County has 9 rural MSW sites with a total monthly charge of \$3,900.

²³ City of Pipestone has a \$6.50 / month drive by fee added to their pickup. Multiple unit housing is charged \$1.50 per unit.

²⁴ Communities who bill for waste collection have a drive by fee of \$4.94 plus MSW disposal fee, others have residential customers who are billed directly by the hauler.

²⁵ 2 and 4 yd temporary dumpsters \$25 delivery, \$12.50 per yard. Rural prices vary and are based on mileage.

²⁶ Users of bags seemingly have a lower waste fee, except there is a drive by fee (example Currie: the city collects a \$7 drive by fee for the hauler if a resident purchases bags (charged at a disposal fee); if a resident contracts with the hauler for a tote, the tote charge includes both waste fee and drive by fee.

Table 19: Commercial Solid Waste Rates by yard²⁷

County	Other size	1.5 yd	2 yd	3 yd	4 yd	6 yd
Cottonwood	\$90 to \$200 range for 1.5 to 6 yard dumpster. Cost varies with weight					
Jackson	\$10.50 to \$24.90 per yd. ²⁸					
Lac qui Parle	Rates set by private hauler					
Lincoln ²⁹	\$32.50 yd or \$135/mo	\$52 to \$113.20				
Lyon		\$21.50		\$42		\$81
Murray		\$48 to \$50		\$75		\$155
Nobles	Range \$3-\$9 /cu yd, most are around \$5 /cu yd					
Pipestone	90 gal tote \$33 90 gal tote \$16.50 ** 90 gal tote \$8.25 * Bags \$8.25	\$80 \$40 ** \$20 *		\$160		
Redwood		\$35 \$45 ** \$55*	\$45 \$55** \$65*	\$55 \$65** \$75*	\$80 \$90** \$100*	\$100 \$125** \$145*
Renville	\$0.048/lb for any size dumpster					
Rock	\$9 to \$16.50 per cubic yd					
Yellow Medicine	Rates set by private hauler					

Table 20 represents waste assessment fees by county. There are three types of assessments in each of the counties: urban household, rural household, and business. Revenues from the assessments range from \$54,385 to \$350,000 per county.

The urban household assessments range from \$10 to \$47³⁰. If the 12 counties are divided into thirds, the lowest third assessment range is \$10 to \$30, the middle third is \$35-\$36 and the highest third assessment range is \$40-\$47.

The rural household assessment range is \$10 to \$42. Again, by dividing the counties into thirds, the lowest rural household assessment range is \$10 to \$20, the middle third is \$24-\$35 and the highest third is \$36-\$42.

The business assessment varies with four counties indicating there is a set assessment fee. The fees in four counties range from \$10 to \$40. Other counties indicate the business assessment is scheduled,

²⁷ Weekly pick up with a monthly charge unless otherwise noted * = 1 pick-up per month, ** = 2 pick-ups per month.

²⁸ Jackson Co – wide range of factors and this may not be the entire range, the top number could be more.

³⁰ Jackson County charges a higher urban assessment because of the curb to curb serve, rural residents self-haul to drop off facilities.

prorates, on a sliding scale, or has a 15% tax on MSW. Lyon County does not have a business assessment. Nine of the twelve counties also have landfill tipping fees. While there are four MSW landfills in the SWRSWC, other landfill fees are collected for demolition landfills and transfer stations.

	Population 2011 est	Household 2011 est	Urban HH 2012	Rural HH 2012	Businesses 2012	Other Non-levy dollars for programs - 2012	Revenue from Assessments 2012
Cotton- wood	11,682	4,860	\$36.00	\$24.00	\$26.00	Landfill tip fees	\$120,940.00
Jackson	10,203	4,422	\$47.00	\$25.00	\$36.00	No	\$91,722.00
Lac qui Parle	7,195	3,145	\$35.00	\$35.00	prorated	Landfill tip fees \$18,840.00 -2012	\$97,332.00
Lincoln	5,819	2,552	\$40.00	\$40.00	\$40.00	Landfill tip fees \$9,930.00-2012	\$ -
Lyon	25,951	10,265	\$30.00	\$20.00		Landfill tip fees \$110,390 -2012	\$273,514.00
Murray	8,640	3,701	\$24.00	\$16.00	Scheduled		\$115,000.00
Nobles	21,365	7,970	\$24.00	\$18.00	15% tax on MSW	\$172,921	\$191,593
Pipestone	9,525	4,038	\$36.00	\$36.00	sliding scale	Landfill tip fees \$26,600.00-2012	\$190,000.00
Redwood	15,986	6,579	\$42.00	\$42.00	sliding scale	Landfill tip fees \$37,740.00-2012	\$350,000.00
Renville	15,540	6,516	\$35.00	\$35.00	pro-rated	Landfill tip fees	\$230,000.00
Rock	9,644	3,915	\$42.00	\$42.00	Pro-rated	Landfill tip fees \$17,800.00-2012	\$196,000.00
Yellow Medicine	10,331	4,260	\$10.00	\$10.00	\$10.00	Landfill tip fees \$22,350.00-2012	\$54,385.00

Financial Incentives.

Table 21 identifies waste reduction incentives and initiatives to reduce waste and recycle. By far the biggest incentive to reduce waste is volume pricing MSW collection and disposal costs. Any program that can reduce the volume of MSW generated, collected / disposed has a positive impact. All counties have volume based disposal / collection of MSW, all but one cover residential recycling, all have opportunities for HHW collection / disposal, HHW product exchange, and there are opportunities to dispose of yard waste, florescent tube, appliances, tires, electronics, and clothing.

Table 21: Incentives and initiatives to reduce waste and to recycle (outline)

Incentives for Waste abatement through county	Cotton-wood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipe-stone	Red-wood	Renville	Rock	Yellow Medicine
Volume Based Waste disposal/collection Fee	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Residential recycling paid for thru county contract / Program	yes	yes	yes	yes	yes	No urban Yes rural	yes	yes	yes	yes	yes	yes
HHW collection / disposal HHW product exchange	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes	yes yes
Pesticide Container Collection	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Yard Waste Composting Facilities available	cities & landfill	cities	cities	cities	cities	cities	cities	cities	cities	cities	cities	cities
Florescent Tube recycling collections offered	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Appliance disposal available	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	Yes
Tire disposal ³¹	yes	no	yes	yes	yes	yes	yes	no	no	yes	Yes	no
Electronics collection	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Education – Reduce, Reuse, Recycle	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	Yes
Pharmaceutical collection: One day event Permanent Collection Box	yes yes	yes yes	yes	no	yes yes	yes yes	yes yes	yes	yes no	yes (2)	yes	yes
USAgain – clothing bins		6 bins	5 bins	4 bins	20 bins	6 bins	1 bin	2 bins	15 bins	12 bins	4 bins	5 bins
Holiday Light Collection/Recycling			12 bins	1 bin	3 bins			2 bin	5 bins ³²	_ bins		5 bins

³¹ Four counties indicated no for county sponsored collection of tires (accepted at waste disposal or transfer facility). These four counties refer people to their tire retailers to collect tires.

³² Redwood has one permanent (year round) Holiday Light Collection bin

Waste composition. In 2000, there was a Minnesota Statewide MSW Composition Study³³ that characterized the mixed municipal solid waste stream and a similar methodology was used in the 2013 Study³⁴. The 2013 study included three day sort events, conducted at each of the six participating facilities, one of which was the Lyon County Regional Landfill. There was a total of 39,088 lbs. sorted state wide, 6520 was from the Lyon County facility. Table 22 is the 2000 Study results depicting the mean by primary material category for comparison to the 2013 Study results.

**Table 22a: Comparison of 2013 to 2000 Statewide Waste Characterization Results
(mean by Weight)**

Primary Material Category	2013 Statewide	2000 Statewide
Paper	24.5%	34.3%
Plastic	17.9%	11.4%
Metals	4.5%	5.1%
Glass	2.2%	2.8%
Organic Materials	31.0%	25.7%
Problem Materials/Electronics	1.2%	1.9%
HHW/HW	.4%	0.6%
Other Waste	18.3%	18.3%
TOTAL	100.0%	100.0%
Note: The total may not equal the sum of the material categories due to rounding. The Problem Materials/Electronics, HHW/HW, and Other Waste categories have slightly different material definitions in the 2013 Study as compared to the 2000 Study. The material category of Other Waste includes but is not limited to bulky items, textiles, carpet, and other items not classified in the other categories.		

A comparison of statewide results identified that potential diversion opportunities were identified as food waste, compostable paper, bag and plastic film and wood waste.

There were three study recommendations: gather additional field data at Greater Minnesota solid waste facilities to address the need for additional field data; conduct commercial generator-based (business, industry, intuition) waste sorts to identify recovery opportunities at the point of generation; and conduct statewide waste sorts every 5 years and, at a minimum, every ten years to measure changes in the mixed MSW stream.

Locally, this study should be a good indication for solid waste composition in the SWRSWC area. Seven of the twelve (58%) counties use the Lyon County Regional Landfill and they generate 58% percent of the waste generated in the region. In general, the results showed that the Lyon County Regional Landfill had less than the state wide average for paper, plastic, metals and organics but higher for glass, electronics and other wastes. One conclusion that to be drawn is that recycling in southwest Minnesota is doing a good job on recycling paper, plastic, metals and organics and the area does not do as well in recycling when there are increased cost and distance factors such as for glass, electronics and other wastes. Another consideration is the generation of paper, plastics, metals, and organics is less,

³³ Link to the 2000Statewide MSW Composition Study: <http://www.pca.state.mn.us/index.php/view-document.html?gid=20102>

³⁴ <http://www.pca.state.mn.us/index.php/view-document.html?gid=20102>

Table 22c: 1999 Waste Composition Study Results³⁵

Material	Average %	Material	Average %
Newsprint (1)	4.82%	Film Plastics (17, 18)	2.69%
Office paper (2, computer paper)	4.22%	Small Yard Waste (30)	0.42%
Magazines/Catalogs (3)	2.20%	Large Yard Waste (31)	0.12%
Corrugated/Kraft Paper (4)	15.32%	Food Waste (32, food waste)	12.25%
Other (phone books, mixed paper other paper, 5, 6, 7, 8, 9)	14.52%	Wood Waste (33, 34, 35, 57)	2.52%
Aluminum Food/Beverage (21)	0.72%	Diapers (36)	2.04%
Steel/tin cans (23)	3.09%	Other Organic Waste (37)	1.26%
Other Aluminum (Commingled aluminum/steel/tin, 22)	3.69%	Tires (55, waste tires)	1.79%
Other Scrap: ferrous & non-ferrous (other Ferrous, 24, 25)	5.72%	Textiles (52, 53, carpet)	2.17%
Food & beverage container (26, 27,28)	3.45%	Major Appliances (43, florescent lights)	1.24%
Other Glass (29)	0.18%	Small Electric Appliances (38, 39, 40, 41, 42, electronic appliances)	2.67%
PET (SPI code 1) (10, 11, 12)	0.60%	Hazardous Waste/Oil Filters/used oil '(44, 45,46, 47, 48,49, 50, 51, 58, antifreeze, HHW))	1.88%
HDPE (SPI Code 2) (13, 14)	0.30%	Other Inorganic Waste (59, unspecified/other)	13.94%
Other Plastics (mixed plastics, other, 15, 19, 20)	2.98%	Demolition/ Construction Debris (56)	2.22%
Polystyrene (SPI Code 6) (16)	0.72%	Total:	100%

Percentage of solid waste from Residential and Commercial/Industrial

Table 23 illustrates both the estimated percentage and tonnage of MSW by residential and commercial/industrial sectors by county and for the region. Regionally, an estimated 63% of the total MSW was derived from the residential sector and 38% from the commercial / industrial sector. Estimated county percentages ranged from a high of 97% residential in Lac qui Parle County to 50% in Redwood County.

³⁵ Table 22c is taken from the R.W. Beck Solid Waste Composition Study and OEA SCORE figures for Martin and Faribault Counties for 1999 and is assumed to be representative of Lyon County and other non-metro area Minnesota counties. The table shows the average percentage breakdown of each material category (by weight) and details the types of materials included in each category.

Table 23: Estimated Percentage and Tonnage of MSW by Residential and Commercial/Industrial Sectors³⁶	% Residential	% Commercial / Industrial	Residential tonnage based on MSW generated	Commercial/industrial tonnage based on MSW generated
Cottonwood	60%	40%	8,059	5,373
Jackson	57%	43%	6,681	5,040
Lac qui Parle	97%	3%	7,111	220
Lincoln	90%	10%	3,025	336
Lyon	55%	45%	20,358	16,656
Murray	60%	40%	3,797	2,531
Nobles	60%	40%	13,775	9,183
Pipestone	75%	25%	7,256	2,419
Redwood	50%	50%	8,542	8,542
Renville	65%	35%	8,700	4,684
Rock	60%	40%	4,278	2,852
Yellow Medicine	80%	20%	7,677	1,919
Region	63%	38 %	99,259	59,756

Source: County GVT's.

³⁶ Tonnages were based on the percentage of total MSW and the regional percentages were calculated from the estimated 2011 county tonnage totals.

II. c. Construction and Demolition Debris

Construction and demolition debris generation and disposal vary with seasonal construction activity as well as clean-up following events such as tornados and floods. Figure 6 represents the geographical location of the Demolition debris facilities. Table 24 identifies the County and the volume of material that is documented and disposed in 2011.

Counties without Construction and Demolition landfills (Lincoln, Redwood, Jackson) direct their demo debris (via the solid waste administrators convey this to their residents) to permitted facilities or on-site disposal if applicable (Permit by Rule).

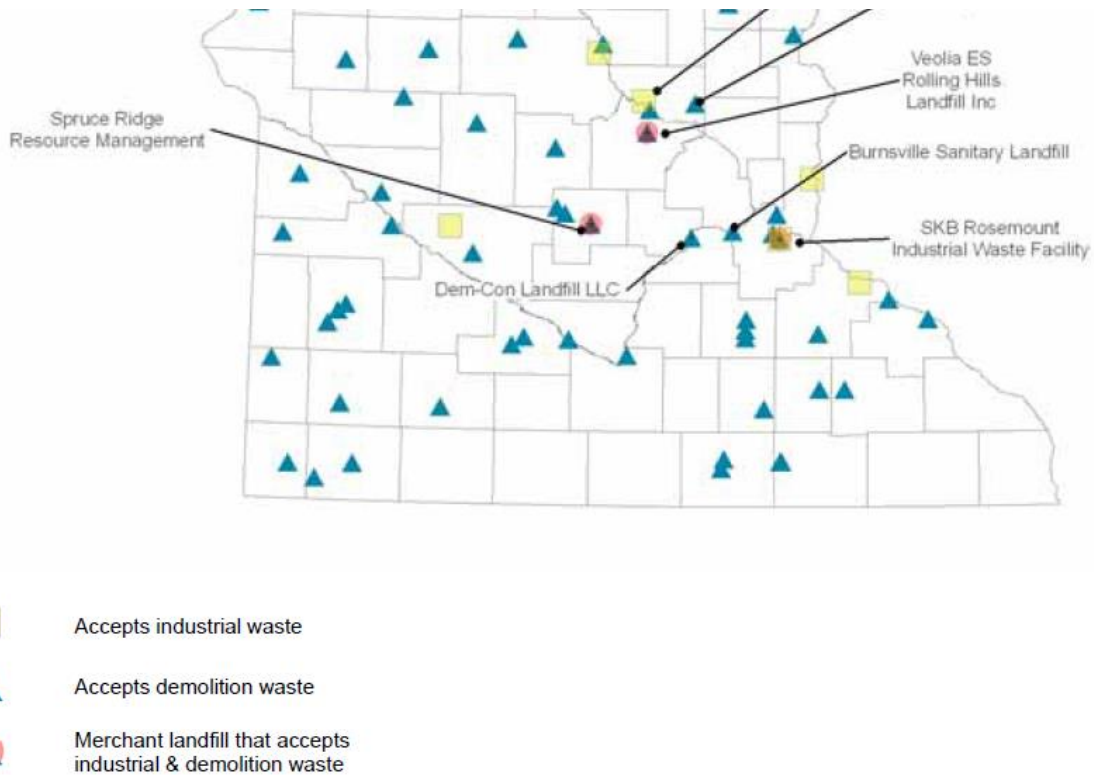


Figure 6: Demolition Debris and Construction Landfills in Southern Minnesota

<http://www.pca.state.mn.us/index.php/view-document.html?gid=41>

Table 24: Construction and Demolition Landfills and Volumes

Facility Name and Permit #	Facility County	Waste Action Description	Amount	Units	Remaining Capacity	Remaining Design Capacity	Remaining Life	Annual Air Space Used	Gate Tip Fee	Gate Tip Fee Units
Cottonwood County Sanitary Landfill SW-143	Cottonwood	Landfilled	2809	tons	31012	15586	20.5	5885	\$19.40	ton
Lac Qui Parle County Demolition Landfill SW-473	Lac qui Parle	Landfilled	4010	cubic yards	45816	45816	11.4	4010	\$7.40	cu yd
D&G Demolition Landfill SW-600	Lyon	Landfilled	4987	cubic yards	49007	49007	8.5	5727	\$8	cu yd
Lyon County Demolition Landfill SW-501	Lyon	Landfilled	11200	cubic yards	87483	87483	7.9	11140	\$20	ton
R & G Demolition Landfill SW-612	Lyon	Landfilled	1533	cubic yards	173466	173466	112	1553		
Murray County Demo Debris Landfill SW-451	Murray	Landfilled	1908	cubic yards	8089	72789	56	624	\$8.60	cu yd
Nobles County Landfill Inc SW-11	Nobles	Landfilled	6247	cubic yards	9719	43119	2.7	15900	\$9	cu yd
Double D Demolition Landfill SW-590	Pipestone	Landfilled	3664	cubic yards	163168	163168	40	4030	\$6.50	cu yd
Renville County Sanitary Landfill SW-90	Renville	Landfilled	5088	tons	124020	124020	17.4	7136	\$20	ton
Rock County Demolition Landfill SW-499	Rock	Landfilled	8815	tons					\$16	ton
Canby Demolition Debris Landfill SW-511	Yellow Medicine	Landfilled	4760	cubic yards	18079	18079	4.5	4760		
Minnesota Falls Demolition Landfill SW-474	Yellow Medicine	Recycled Landfilled	1484 4452	cubic yards	79688	79688	15	5350	\$9.6	cu yd

Source: MPCA, Counties where there are facilities. There are no Demolition Landfills in Jackson, Lincoln or Redwood Counties

II. d. Major Solid Waste Generators

Table 25 identifies three to four of the largest major solid waste generators in each of the SWRSWC member counties. The waste type as well as the volume of waste is also identified. In some cases, the volume of waste was not possible to obtain from either the waste hauler or the business, citing they did not want the volumes made public.

The SWRSWC will sponsor a waste audit training for staff to enable county staff and volunteers to conduct waste audits at large generators, schools, hospitals, and government facilities. They will enlist services for training by service providers such as MnTAP or other qualified persons and will report to the SWRSWC at the November meeting the number of audits conducted for the year. It is anticipated that the commercial audits will begin with identified major waste generators.

Table 25: Major Solid Waste Generators, Waste Type and Volume (4 largest in each county)

County	Business	Waste type	Volume
Cottonwood	<ul style="list-style-type: none"> Toro PM Windom HyVee Minnetex 	<ul style="list-style-type: none"> Corrugated, Aluminum, Steel Slaughterhouse waste, cardboard, aluminum, steel Cardboard, plastic, food waste Cardboard 	<ul style="list-style-type: none"> 1288 tons 410 tons 97.5 ton 47.5 ton
Jackson	<ul style="list-style-type: none"> AGCO Kozy Heat Hitch doc Ziegler Cat 	<ul style="list-style-type: none"> Cardboard, Paper, Plastic, scrap iron, wood pallets Cardboard, Paper, Plastic Cardboard, Paper, Plastic Cardboard, Paper, Plastic 	<ul style="list-style-type: none"> 4,068 tons 1,026 tons No tracking No tracking
Lac qui Parle	<ul style="list-style-type: none"> AGP AMPI Johnson Memorial & Madison Hospitals, clinics, Nursing Homes Schools (Lac qui Parle Valley HS, Dawson Boyd HS) 	<ul style="list-style-type: none"> Food, recyclables, garbage Food, cardboard, waste, garbage, recyclables Cardboard, food, garbage, Paper cardboard, food, recyclables, garbage 	<ul style="list-style-type: none"> minimum 240 ton 52 ton 52 ton
Lincoln	<ul style="list-style-type: none"> Lincoln County Courthouse Lincoln County parks Tyler, Ivanhoe, Hendricks, and Lake Benton Schools 	<ul style="list-style-type: none"> Cardboard, Metal, Plastic, Paper, Glass. Cardboard, Metal, Plastic, Paper, Glass. Cardboard, Metal, Plastic, Paper, Glass. 	<ul style="list-style-type: none"> 250 cubic yards 200 cubic yards 1,476 cubic yards
Lyon	<ul style="list-style-type: none"> Schwans ADM (Archer Daniels Midland) Turkey Valley Farms 	<ul style="list-style-type: none"> Food products, paper, metal, plastic Coal ash, mixed waste Plastic, cardboard 	<ul style="list-style-type: none"> 2280 tons 638 tons 468 tons
Murray	<ul style="list-style-type: none"> Monogram Meats – Chandler Page 1 Printers Murray Co Central School Fulda Public School 	<ul style="list-style-type: none"> Corrugated cardboard, office paper, magazines, casings, wood, batteries, plastic & metal Paper Paper, food waste Paper, food waste 	<ul style="list-style-type: none"> 3137 tons 400 tons 95 tons 45 tons
Nobles	<ul style="list-style-type: none"> JBS Walmart Bedford Highland Manufacturing 	<ul style="list-style-type: none"> Corrugated cardboard, metal Corrugated cardboard, plastic Plastic, metal, etc Wood, metal, plastic 	³⁷

³⁷ Nobles County was unable to obtain volumes from the businesses or haulers citing data privacy.

Pipestone	<ul style="list-style-type: none"> Fey Industries Minnesota West – Pipestone Campus J & B Group Bayliner Marine 	<ul style="list-style-type: none"> MSW, recycle scrap vinyl (recycled) MSW, cardboard (recycled) MSW MSW, green wood, fiberglass, wood scrap, cardboard 	<ul style="list-style-type: none"> 407.5 tons 897 cubic yards 312 ton 1349 tons
Redwood	<ul style="list-style-type: none"> Schult Mobile Homes Jackpot Junction Casino Hotel Jonti-Craft / Puzzle Craft Daktronics and RVI 	<ul style="list-style-type: none"> manufacturing waste; fibers , plastic, ferrous & nonferrous, & clean wood waste (recycling) food waste/operations waste, office/hotel/general MSW; rigids/fibers & cardboard (recycling) manufacturing /office /facility waste; clean wood waste, cardboard, pallets, fluids, & ferrous \$ nonferrous (recycle) office & manufacturing waste; ferrous & nonferrous, plastic, electronic waste, cardboard – (recycling); wood waste – (recycling & fuel); scrap plastic /foam /etc. (fuel) 	<ul style="list-style-type: none"> 4236 tons 1210 tons 2111 tons 731 tons
Renville	<ul style="list-style-type: none"> Southern Minnesota Beet Sugar Coop Warner Manufacturing B & D Market 	<ul style="list-style-type: none"> Ash Plastic, cardboard 	<ul style="list-style-type: none"> 3,000 tons __ tons __ tons
Rock	<ul style="list-style-type: none"> Glens Food Center Luverne Public Schools Minnesota Veteran’s Home & Sanford Health Manley Tire 	<ul style="list-style-type: none"> MSW, cardboard, plastic, food MSW, food, paper MWS, food, medical waste Waste tires, waste oil, waste batteries 	<ul style="list-style-type: none"> 189 ton 270 ton 417 ton 500 ton
Yellow Medicine	<ul style="list-style-type: none"> SMI Granite Fluid Power Prairie’s Edge Casino Resort 	<ul style="list-style-type: none"> Industrial Industrial Paper, cardboard, glass, plastics, metal 	<ul style="list-style-type: none"> ³⁸ 352.52 tons³⁹
Source: SWA’s from the SWRSWC, MPCA (Greencorp data)			

³⁸ Yellow Medicine County was unable to obtain volumes from businesses identified.

³⁹ Numbers based on Greencorp report for 2011 Prairie’s Edge Casino Resort recycling numbers. Other waste volume unknown

II. e. Review of Recent Local and Regional Solid Waste Planning (and initiatives). Table 26 identifies solid waste planning and initiatives. The SWRSWC identified several planning efforts that have occurred beyond the five year requirement because they have influenced planning decisions and initiatives since the last plans were approved. A summary of each planning activity follows Tables 26.

Table 26: Solid Waste Planning		Cottonwood	Jackson	Lac qui Parle	Lincoln	Lyon	Murray	Nobles	Pipestone	Redwood	Renville	Rock	Yellow Medicine
a.	Participating Member of the SWRSWC	X	X	X	X	X	X	X	X	X	X	X	X
	Regional Review of Alternatives	X	X	X	X	X	X	X	X	X	X	X	X
	Burn Barrel Education Grant	X	X	X	X	X	X	X	X	X	X	X	X
	50% Recycling Goal	X	X	X	X	X	X	X	X	X	X	X	X
	Green Corps Application for outreach assistance	X	X	X	X	X	X	X	X	X	X	X	X
	12 County Solid Waste Management Plan	X	X	X	X	X	X	X	X	X	X	X	X
b.	Participating member of the Southwest Solid Waste Administrators Association	X	X	X	X	X	X	X	X	X	X	X	X
c.	Single-sort Recycling	X	12-14	NO	07-08	07-08	NO	1994	NO	NO	NO	2012	NO
d.	Redwood – Renville Joint Powers									X	X		
e.	Prairie Ecology Bus	X	X	NO	X	X	X	X	X	NO	X	X	NO
f.	Lyon Co Regional HHW Facility Kandiyohi Co Reg. HHW facility	X	X	X	X	X	X	X	X	X	X	X	X
g.	Waste Pesticide container collection program	X	X	X	X	X	X	X	X	X	X	X	X
h.	Rock County Construction and Demolition Debris Facility					X						X	
i.	Lyon County Regional Landfill			X	X	X			X	X		X	X
j.	Bi-County Recycling						X		X				
k.	Lyon County Regional Recycling Center – project / study				X	X			X				X
l.	Redwood County Waste to Energy facility (Lamberton / Rdwd Falls)		X		X				X	X	X		
m.	Murray Co Regional Recycling initiative				X		X						
n.	PC's For People									X			
o.	Recycle your Holiday Lights			X	X	X			X	X	X		X
p.	Pharmaceutical Disposal	X	X	no	no	X	X	X	X	X	X	X	X
q.	USAgain – clothing recycling	X	X	X	X	X	X	X	X	X	X	X	X
r.	Lyon County Landfill alternative feasibility study			X	X	X			X	X		X	X
s.	Lyon-Yellow Medicine Joint Powers					X							X
t.	Shoe collection with local schools			X									
u.	Thrift and Reuse Stores	X	X	X	X	X	X	X	X	X	X	X	X

a. The Southwest Regional Solid Waste Commission was formed to *foster an integrated approach to solid waste management in the region and to follow the order and preference of waste management strategies identified in 115A.02 [Minnesota Waste Management Act]*. The intent of the Counties is that *they cooperate in a joint venture to provide the greatest public service benefit possible for the entire contiguous twelve (12) county area encompassed by the Counties in planning, management, and implementation of methods to deal with solid waste in southwest Minnesota.*

Regional Review of Alternatives (2002-2003). A significant regional planning activity that has been completed in southwest Minnesota was the Regional Review of Solid Waste Management Alternatives and its subsequent update. The initial planning process was completed under the auspices of the Southwest Regional Development commission. Lyon County Environmental Office completed the update with some assistance from the Southwest Regional Development Commission. All active counties of the SWRSWC were involved in the development of the regional assessment of waste-to-energy, MSW Composting and co-composting, as well as landfilling. Based on the information and analysis compiled in the Regional Review of Solid Waste Management Alternatives, the Southwest Regional Solid Waste commission determined that the most prudent and feasible waste disposal practice remained as landfilling, yet would remain open to other alternatives as they came forward.

Burn barrel Education Grant. In 2007-2009, the 12 counties were granted funds to implement burn barrel education in the region. This consisted of an effort called Burn Less Breath Better Southwest Regional Burn Barrel Campaign. The grant was used to educate public on the danger of burn barrel emissions and research alternatives. It was promoted through media ads and brochures. Funds remaining from the grant were also used to purchase promotional mouse pads, can coolers, and flashlights that required no batteries. Surveys conducted indicated that the solution to the burn barrel problems is not more laws and enforcement, but rather public entities at all levels providing more alternatives to MSW disposal and recycling that are convenient, affordable, and reasonable.

50% recycling goal for the Southwest Region. In 2007, the multi county effort was initiated as a means of identifying areas where recycling could be increased to meet the 50% recycling goal (base rate). The Solid Waste Administrators reviewed the commonalities among the counties as well as the variances in recycling. They assessed factors to be considered to accomplish 50% recycling, identified challenges in moving forward, and presented conclusions. The Solid Waste Administrators recommended to the SWRSWC that to increase recycling to reach the 50% goal, recycling efforts should focus on increasing the effort to recycle fiber materials as well as increasing recycling at the commercial and industrial sectors. The Resolution was adopted by the SWRSWC on January 28, 2008 and is located in Appendix D. As of 2013, the estimated recycling rate (from regional GVT) is 45.8%.

In 2010, the SWRSWC initiated an application for assistance to Green Corps for two workers to assist the outreach workers to work with the schools and one to two businesses in each county by auditing what they do and ways they could improve waste reduction / increase recycling. The initiative was not selected for funding. The MPCA cited that the scope of the project was too great for the GreenCorps to cover.

12 County Solid Waste Management Plan (2012-2013). Building from the previous multicounty effort, the Southwest Regional Solid Waste Commission has begun the process to develop a 12 county

Solid Waste Management Plan that will look at an integrated solid waste management system as a means of waste management to address achieving the state goals of 50% recycling in next 10 years, increased opportunities for rural residents and commercial/industrial/institutional entities to participate in recycling, direction on how counties may pursue increased waste reduction, organics management, and resource recovery to increase diversion to landfills, and looking at new strategies to achieve the goals.

b. In 1992, the County Solid Waste Administrators began meeting to discuss ways to improve local programs and work together where appropriate. Discussion at the staff level included funding opportunities to enhance the solid waste programs to reduce, reuse, and recycle. Many of the waste reduction, recycling, education and other campaigns were initiated by the County solid Waste Administrators.

c. Single Sort Recycling. While Nobles County has been implementing single sort recycling since 1994 and Lincoln and Lyon counties began in 2007-2008, several of the other counties needed to wait until their existing multiyear recycling contracts were completed and many submitted RFP's for single sort recycling. During 2011 and 2012, the counties of Cottonwood, Jackson and Rock changed their contracts to go from sorting recyclables to a single sort recycling program in an effort to increase the volume of recycling.

d. Redwood – Renville Counties Joint Powers Agreement. A Joint Powers agreement was entered on January 1, 2012. The purpose of the Joint Powers is to facilitate the development of an integrated solid waste management program to serve the counties. The specific goals include managing waste in a manner that will: protect public health and the environment; conserve resources through the development of a recycling facility; be in accord with the hierarchy established in MN Statutes 115A.02; minimize land filling; be cost effective; minimize potential liability of citizens, businesses and taxpayers in the counties; encourage responsibility by generators of waste; and allocate system costs equitably among those who use or benefit from the system.

e. Prairie Ecology Bus. The **3R Challenge: Reduce, Reuse and Recycle** geared for grades 3-6 and tailored to each community and what the recycling options are for that county. It is comprised of two parts. The program begins with a large group assembly that lasts an hour. The assembly is then followed by individual 45-60 minute classroom workshop sessions with hands-on activities reinforcing and expanding upon the information presented in the assembly. Students learn the history of garbage, why it's a problem now, ways to reduce the amount of trash created, generate ideas for reusing items rather than landfilling them and what can/cannot go in the recycling for that community. We ask that students then become the "teachers" and go home to share what they've learned with their families and encourage them to recycle properly and reduce their garbage footprint.

f. Lyon County and Kandiyohi County each host Regional Household Hazardous Waste Facilities. All twelve counties in the SWRSWC planning region are participating members of one of the two regional facilities. HHW consists of products that can be an environmental or health hazard when stored or disposed of improperly. A product or substance is hazardous if it has one or more of the following properties: Corrosive/Caustic, Flammable, Toxic/Poisonous, or Reactive. Items not accepted at the facilities include: explosives, radioactive wastes and pharmaceuticals (refer to Table 27 for pharmaceutical disposal) for proper disposal locations. The Lyon County Facility accepts rechargeable

batteries and lithium button batteries and e-waste for shipment to a recycler. Fluorescent bulbs are accepted from households and businesses at the HHW facility at a charge.

Very Small Quantity Generators (VSQG's). The Lyon County and Kandiyohi County Regional Household Hazardous Waste Facilities are licensed to accept hazardous waste from VSQG's, businesses and nonprofit organizations that generate less than 220 pounds of hazardous waste per month. This is a fee-for-service program and is done through application and appointment only.

Each of the HHW facilities also has a product exchange where good paint, aerosols and other products are available at no cost.

Waste pesticide collection. The counties work with the Minnesota Department of Agriculture (MDA) to help farmers and households to safely dispose of unwanted and unusable pesticides through the Waste Pesticide Collection Program. The program provides an environmentally sound option to dispose of unusable and unwanted pesticides. Through the Waste Pesticide Collection program, pesticide users in every county around the state will have opportunities to dispose of unwanted agricultural pesticides once every other year and household pesticide products at least once a year.⁴⁰

g. Waste Pesticide container collection program. The counties work with the MDA to advertise and collect triple rinsed empty pesticide jugs through an annual one day collection event. They are baled up and hauled to a central facility for marketing or bagged and picked up by MDA. Murray County serves as a central facility and collects 2.5 gallon jugs from Murray, Rock, Nobles, Cottonwood, Jackson, Lincoln, Lyon, Pipestone, and Yellow Medicine Counties. Redwood County serves as a central facility for Redwood and Renville Counties. Lac qui Parle County distributes bags provided by MDA and bags are brought to two drop sites where MDA arranges for pickup.

h. The Rock County Construction and Demolition Debris Facility accepts demo and construction debris from the Lyon County Regional landfill facility. Instead of an empty back haul from an MSW haul from Rock County, the load is backhauled with demolition debris, which helps offset transportation costs involved with proper disposal of waste.

i. Lyon County Landfill. This is a Regional landfill facility that has recently gone through a Certificate of Need (CON) process for facility expansion. The SWRSWC participated in the review process. Lyon County conducted a feasibility study for landfill gas utilization and it was found to be not cost effective. The site was studied by the Rural Minnesota Energy Board and the Metropolitan Energy Policy Coalition a potential location for a wind turbine project to generate power for use by the Metropolitan Energy Policy Coalition members. The project did not go forward due to timing (economy downturn).

Lyon County Regional Landfill Advisory Board. This body provides policy guidance on the operation of the Lyon County Landfill. However, final authority remains with Lyon County regarding the overall management of the facility. Member Counties of the Board are Lyon, Redwood, Yellow Medicine, Rock, Lincoln, Pipestone and Lac qui Parle.

j. The Bi-county Recycling program (formally Tri-county) was originally set up with three participating counties: Pipestone, Cottonwood and Murray, with the physical location in Slayton (Murray

⁴⁰ Waste pesticide collection will be addressed in the individual county appendices.

County). In 2011, Cottonwood County ended the recycling partnership with Murray County and went to a single sort program. During 2012, the program is operating with Pipestone and Murray County.

k. Lyon County Regional Recycling Center project / study. Lyon County conducted a feasibility study of a semi-automated single stream materials recovery facility (MRF). Operation costs were higher than the projected revenues and the project was found to be not feasible (Appendix D).

l. Redwood County Waste-to-Energy facility feasibility study. In 2002, Redwood County initiated interest in the feasibility of a regional waste to energy facility. The feasibility study was conducted by Redwood County in conjunction with several environmental consultants. Pipestone and Jackson Counties had passed a resolution in 2002 that they support the concept. The Southwest Regional Solid Waste Commission has also supported the concept by resolution. In addition, Pipestone County, the Southwest Regional Solid Waste Commission and the Rural Minnesota Energy Task Force, and neighboring counties have passed Resolutions to change Minnesota State Statute Section 216B.2422 to include an energy recovery facility used to capture the heat value of solid waste or RDF. Recently adopted Federal air emission standards represent the strongest and most effective actions ever taken to control emissions from waste combustion, signifying waste combustion as a very clean source or renewable energy, and by designating a waste-to-energy facility as a renewable energy source, lower costs for implementing solid waste management may be realized by local units of government. This project did not go forward. The company proposing the facility folded.

m. Murray County has looked into a regional facility for recycling. This facility would have incorporated many of the surrounding Counties. The project did not move forward because of cost and a lack of solid commitment from other counties.

n. PC's for People. The program was initiated by the Blandin Foundation MIRC project and the pilot communities in the region were Worthington and Windom. The communities host an event that will collect, refurbish, and distribute computers back into the community. Redwood County is currently the only county that is participating in this program.

o. Holiday Light collection. The Recycling Association of Minnesota (RAM) initiated a holiday light recycling project in 2008 in coordination with the Clean Energy Resource Teams (CERT). Since that time, the Counties or business locations within the counties of Lincoln, Lyon, Pipestone, Redwood, Renville, Yellow Medicine, and Lac qui Parle, have participated in the collection events that often remove the older inefficient holiday lights by offering the opportunity to recycle them.

p. Pharmaceutical Disposal has been initiated in several of the southwest counties between 2010 and 2012 by Law Enforcement due to concerns of prescription drug abuse and requirements that the collections are secured events or drop off locations. One day events are normally in conjunction with DEA⁴¹ national events. MPCA is also involved because waste pharmaceuticals are considered hazardous waste and must be transferred to an incineration facility by a licensed hazardous waste hauler. From the environmental perspective, proper disposal of pharmaceuticals will help keep them from being flushed

⁴¹ DEA is the Drug Enforcement Administration.

into the wastewater /septic systems (and entering water supplies)⁴². It has been demonstrated that when pharmaceuticals enter ground water it causes adverse effects to fish and other aquatic wildlife as well as unintended human exposure to chemicals in the medications. . Incineration is the preferred method for destruction of household pharmaceuticals. Table 27 identifies the drop off locations or collection events sponsored by law enforcement within the 12 county region.

- q. USAgain has placed collection boxes in various communities for the collection of textiles. They have contracts with counties, cities, or commercial establishments for the siting of those containers and the sharing of revenues.
- r. Lyon County conducted a feasibility study on alternatives to landfilling MSW. This included the development of RDF. This study showed these alternatives were not cost effective. (Appendix D)
- s. Lyon – Yellow Medicine Counties Joint Powers. (Appendix B)
- t. Shoe collection with local schools. Lac qui Parle County participates in a shoe collection program with the local schools.
- u. Thrift and Reuse Stores. These are second hand stores that sell clothing and household good including furniture, books, dishes, small electronics, and other items. There are one or more second hand stores in each of the SWRSWC member counties.


⁴² New study of pharmaceuticals in Minnesota surface waters:  [Wastewater Treatment Plant Endocrine Disrupting Chemical Monitoring Study](#)

Table 27: Pharmaceutical Waste Collection County / year initiated/ contact information	Drop off location	Availability	How and where do you advertise information about the drop box?
Cottonwood / 2011 jason.purrington@co.cottonwood.mn.us	LEC 902 5th Ave., Windom, MN	24/7 and fall day event ⁴³	Radio and word of mouth, during the drug take back initiatives
Jackson / 2010 Doug.eicholz@co.jackson.mn.us	Lobby @ 400 Sherman St. Jackson, MN	24/7 and one or two one day DEA events/yr	Advertised every month or two
Lac qui Parle / 2013	600 W 6th St Madison, MN	24/7 and one day DEA events/yr	
Lincoln	None	NA	
Lyon / 2011, work jointly w Marshall PD toddroelfsema@co.lyon.mn.us and stevelouwagie@co.lyon.mn.us paula.curry@marshallmn.com	Lobby of LEC 611 W Main St Marshall, MN	24/7, one day events, and participate in DEA events	Pamphlets and fliers. Posters. Word of mouth
Murray / 2011 Murray County sheriff's office	2500 28 th St Slayton MN 56172	24/7 and one day event	
Nobles / 2011 cheinrichs@co.nobles.mn.us	1530 Airport Road, Suite 100 Worthington, MN 56187	24/7	
Pipestone / 2012 Pipestone Sheriff's Department	416 S Hiawatha Ave Pipestone, MN 56164	24/7	
Redwood / 2011 / Randy_h@co.redwood.mn.us	303 E. 3 rd Street Redwood Falls, MN	One day event per year (April 27, 2013 10am – 2pm)	Special collection advertised on radio and newspaper
Renville County / 2012 / scott@co.renville.mn.us Buffalo Lake / 2012 / buffalolakepolice@gmail.com	105 S 5 th St, Suite #210 Olivia, MN 301 N Main St, Buffalo Lake, MN	24/7 + one day collection 2 PM to 2 AM M-Sat + one day collection	Newspapers and radio; pamphlets at pharmacies, funeral homes, hospice, etc. Also discussed at various community presentations and in community newsletters.
Rock / 2012 Sheriff's office	1000 North Blue Mound Ave Luverne, MN 56156	24/7	
Yellow Medicine / 2012 Bill.flaten@co.ym.mn.gov	930 4 th St, Suite 1 Granite Falls, MN	M-F 8am to 4pm	Website: www.ymcsheriff.com click on Take it to the box

⁴³ The county anticipates obtaining a drop box in early 2013.

Summarize Solid Waste collection and generation constraints and opportunities that have impacted the existing or may impact the proposed system.

Impediments to regional projects, both past and for future consideration include differences between solid waste programs in each county and from community to community. Residents may live in one community or county where there is a program implemented, but work in another community or county where a program is implemented differently or not at all.

Other considerations would include differences between the public and private sector waste haulers, types of contractual arrangements between the county and a recycling contractor providing the services, and ownership of the recyclables in recycling contracts.

The proximity, distance, and low volume of waste generated in lower populated areas could be considered a barrier when addressing efficiencies of scale. Examples of such would be the type of collection containers and frequency of collection based on when the containers are at capacity.

Opportunities are often constraints that have been overcome such as problems in the waste stream. These may include bulky materials (mattresses or silage bags), asphalt shingles, and building materials. Opportunities for these “problems” may include mattress recycling, modification of silage bags to be constructed of biodegradable materials and composted, collect asphalt shingles and process them to be mixed with materials for paving roads, and enable construction companies / builders to separate recyclable materials from materials that cannot be recycled.

Currently the Lyon County Landfill collects and destroys landfill gas through a candlestick gas flare. Lyon County conducted a feasibility study which looked at the utilization of this gas. This study looked at two alternatives; (1) electric generation and; (2) piping the gas to a user in Marshall. Neither was cost effective. An alternative to explore would be working with business willing to site near the landfill that would use this gas. The County has land which would be available for this proposal. A Waste Management landfill in Iowa has a greenhouse adjacent to the site which utilizes their gas.

The legal ramifications of a county designating waste destination through ordinance does hinder the ability of selecting a waste disposal facility of the county’s choice, but also opens the opportunity to work with communities through contract to direct waste to a designated facility.

The level of staffing and funding available throughout the region differs. This can be a constraint for counties that have staff limitations normally due to funding limitations.

Challenges identified in the 50 percent recycling goal study adopted by the SWRSWC include:

- 1) Cities, which have organized collection of MSW and recyclables, have a “captive” audience.⁴⁴The service is provided, and their customers have a convenient way to participate. Rural

⁴⁴ Cities or residential areas with curbside residential recycling by county

Cottonwood: Windom, Mountain Lake, Westbrook, Storden, Jeffers, Bingham Lake and Delft

Jackson: Jackson, Lakefield, Alpha, Wilder, Heron Lake, Okabena

Lac qui Parle: Boyd, Dawson, Madison, Marietta, Bellingham, Nassau, and Louisburg

Lincoln: Tyler, Ivanhoe, Hendricks, Lake Benton and Arco

residents do not have curbside, or home pickup service of recyclables. They can obtain MSW collection services from private waste haulers, but recyclable collection is through drop off sites. The breakdown of rural versus urban residents in the counties in the southwest region ranges from about 25 percent to nearly 45 percent being rural residents.

- 2) The value of recyclables, as can be validated by those counties who collect and market their own recyclables, is much less than it was at the peak values from the recent past. The revenue derived from the sale of some recyclable products does not cover the costs associated with the collection, processing, storage, and transporting of goods.
- 3) Light-weighting of recyclables. This trend does and will continue to affect the volume by weight of materials collected for recycling. More plastic bottles and jugs are needed per pound and the weight / size of newspapers has been reduced over the past five years, which increases the challenge to achieve recycling goals.
- 4) Whether we live in communities, or in rural areas, we are all facing less stability in our population base. Our population base is always changing, and more often than not, shrinking in the numbers of residents. We are seeing our collection costs continue to increase, and our population is decreasing. When we factor in the cost of collection only, we face a total recycling cost that is quite high.
- 5) The mix of people living in our communities and in our rural landscapes is changing more rapidly than we had seen historically. People have moved off farms into town as the farms are sold off, or become part of a larger agricultural operation. Some people move to the country for what they perceive as peace, quiet, and the freedom to do anything they want. We are also facing some various degrees and types of diversity, which can prove to be challenging in obtaining cooperation in our environmental initiatives. The barriers we face may be language, political, cultural, or educational. Some of the key challenges appear to be some individual's lack of knowledge and/or lack of concern. The issues that we in the environmental field view as significant, may not even register with some members of the general public. It is our responsibility to find a way to reach these individuals. It is possible that we are going to have to rely less on traditional education and information practices, and look at other ways to educate our residents and our businesses. It is also possible that we are going to have to do this on a more frequent basis, simply because of the changing population.
- 6) Some member counties feel that additional enforcement efforts may be necessary to boost recycling rates. As an example, if the burn barrel ban was initiated in the State of Minnesota,

Lyon: Balaton, Cottonwood, Florence, Garvin, Lynd, Ghent, Marshall, Minneota, Russell, Taunton, Tracy; also the unincorporated places of Amiret, Green Valley, Kline Addition & Wayside rest, Lake Yankton (West side), County road 25 (by Lynd) and housing units adjacent to municipal boundaries.

Murray: Fulda, Slayton, Lake Wilson, Currie, Dovray, Iona, Chandler, Avoca

Nobles: Kinbrae, Wilmont, Adrian, Bigelow, Brewster, Dundee, Ellsworth, Lismore, Round Lake, Rushmore, Worthington

Pipestone: Pipestone, Edgerton, Jasper, and Ruthton

Redwood: Belview, Clements, Delhi, Lambertson, Lucan, Milroy, Morgan, Redwood Falls, Revere, Sanborn, Seaforth, Vesta, Wabasso, Walnut Grove, Wanda

Renville: Bird Island, Danube, Fairfax, Franklin, Hector, Morton, Olivia, Renville, Sacred Heart

Rock: Luverne, Hardwick, Magnolia, Beaver Creek, Hills, Steen

Yellow Medicine: Canby, Porter, St. Leo, Clarkfield, Hanley Falls, Granite Falls, Echo, Wood Lake

it would be necessary for member counties to assist with the enforcement of this ban. This ban would potentially add additional materials to the current recycling stream.

- 7) As time has passed, our society has evolved to be more consumer driven, and this society has been willing to pay for convenience. A drawback to that convenience has proven detrimental to the environment. Fast food is convenient, but we are inundated with the leftover packaging of that food. There is excessive packaging in nearly everything that we purchase, from food products to other consumer goods. More often than not, these packages are not recyclable. Until such a time as the consumer becomes aware of these problem packages, and other disposable items, the waste stream will continue to increase.
- 8) As a consumer driven society, we are prone to believe that we must have all the same things as our peers. This trend is obvious by the number of television sets, DVD players and VCR's, cell phones, I-pods, and other electronic devices that we all own. The average life span of many of these consumer electronics is three to five years. The modern electronic devices are made to be replaced, not repaired, which leaves the product disposal options limited. In our rural region, there are relatively few permanent facilities which will accept consumer electronics for recycling. Without more effective product stewardship laws in place, there seems to be no end in sight for this situation.
- 9) The current economic downtrend, and the "cost" to the consumer to dispose of some waste materials has prompted improper disposal of many of these products. Illegal dumping, on-site burying, or burning of waste products are the result. It is unclear if the improper disposal of waste is an end result of a lack of education, reduced community involvement, or simply an apathetic portion of the population. For whatever reason, it is not likely that voluntary compliance will be effective if all the other educational, promotional, and incentive based plans are not implemented.
- 10) Misconceptions and misunderstandings prevail throughout the general public about "recycling." There are some individuals who believe that those persons involved in "getting rich" off the value of the recyclable commodities while the others view the same materials as "garbage." The individuals who view recycling as a "waste of time" must be better informed as to the collection, processing, and marketing of these same materials. This is no easy task, as there are still many differences as to what is and is not recyclable in each member county. Our tasks are many and varied if we are to continue our march toward our agreed upon goal of the "South West Region," a 50 percent recycling rate by reporting year 2014.

Resolution of Conflicting, Duplicative, or Overlapping Local Waste Management Efforts

While there have not been overlapping local waste management efforts, there have been misunderstandings from time to time among the counties or between state agencies and counties. The Southwest Regional Solid Waste Commission has served to assist in airing issues that may have created conflicts. This can be attributed to the manner in which the County manages its overall system and waste collection. The Counties have not experienced conflicting or overlapping management efforts. Each of the counties has their own programs, which the regional plan with projects will look at sharing responsibilities and help in reducing duplication. The municipalities do not duplicate with the counties are doing.

III. EXISTING INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

All of the waste collected in the SWRSWC that is not recycled or otherwise processed is being hauled by a combination of public and private waste haulers to landfills and a resource recovery facility. Landfilling is the predominate method of waste disposal for the twelve SWRSWC Counties and accounts for 99% of the collected waste disposal method. There are four MSW landfills within the twelve county planning region (Cottonwood County Landfill, Lyon County Regional Landfill, Nobles County Landfill, and the Renville County Landfill) that provide the majority (96%) of the waste disposal needs for southwest Minnesota. Cottonwood County Landfill accepts waste from Jackson and Cottonwood counties (10% of the collected waste) and has a \$53.31 per ton tipping fee; the Lyon County Regional Landfill accepts waste from Lac qui Parle, Lincoln, Lyon, Pipestone, Redwood, Rock and Yellow Medicine counties (54%) and has a \$45 per ton tipping fee; the Nobles County Landfill accepts waste from Jackson, Murray, Nobles, Pipestone, and Rock Counties (22%) and has a \$50 per ton tipping fee; and the Renville County Landfill accepts waste from Redwood and Renville counties (10%) and has a \$50 per ton tipping fee. The remainder of the collected solid waste is disposed of at three facilities located outside of the twelve counties: the WMI Landfill in Dickenson County, IA received waste from Jackson County (3%), Lac qui Parle County has some waste disposed of at the McLeod County Landfill (0.03%), and Jackson County sends waste to the Prairieland Resource Recovery Facility in Martin County (1%). The tipping fee at these facilities are \$56, \$45, and \$80 (out of county waste) respectively. Further discussion of these facilities will be provided later in this section.

Figure 7 represents the percentage of flow of MSW in 2011 from an origin county to a destination MSW facility. There are currently four MSW transfer stations in the region (Rock, Lincoln, Murray, Lac qui Parle counties), waste from these facilities are transferred to the Lyon County Regional Landfill. Transfer stations allow for the consolidation and compaction of MSW before it is transported to a facility. It also allows for residents to self-haul to a facility and provides a nearby disposal alternative to on-site disposal. Figure 8 represents the location of the landfill waste disposal facilities in 2011, Figure 9 identifies 2011 Resource Recovery Facilities and Transfer Stations in Minnesota, and Figure 10 depicts facilities that make refuse derived fuel and combustion facilities in Minnesota.

Table 28 identifies the total volume of MSW generated and MSW available for resource recovery by county as well as the destination waste facilities.

In 1997, the SWRSWC approved the Regional Review of Alternatives which was incorporated into the twelve member county solid waste management plans and approved by the Office of Environmental Assistance. The subsequent update was completed in 2002 and incorporated into each of the individual county plans as they were updated. The analysis of both the original and updated Review of Alternatives concluded that continued landfilling was the most prudent and feasible solid waste alternative, after waste reduction, reuse, recycling. The Counties in the SWRSWC will continue to explore regional processing possibilities, and will be discussed later in this document.

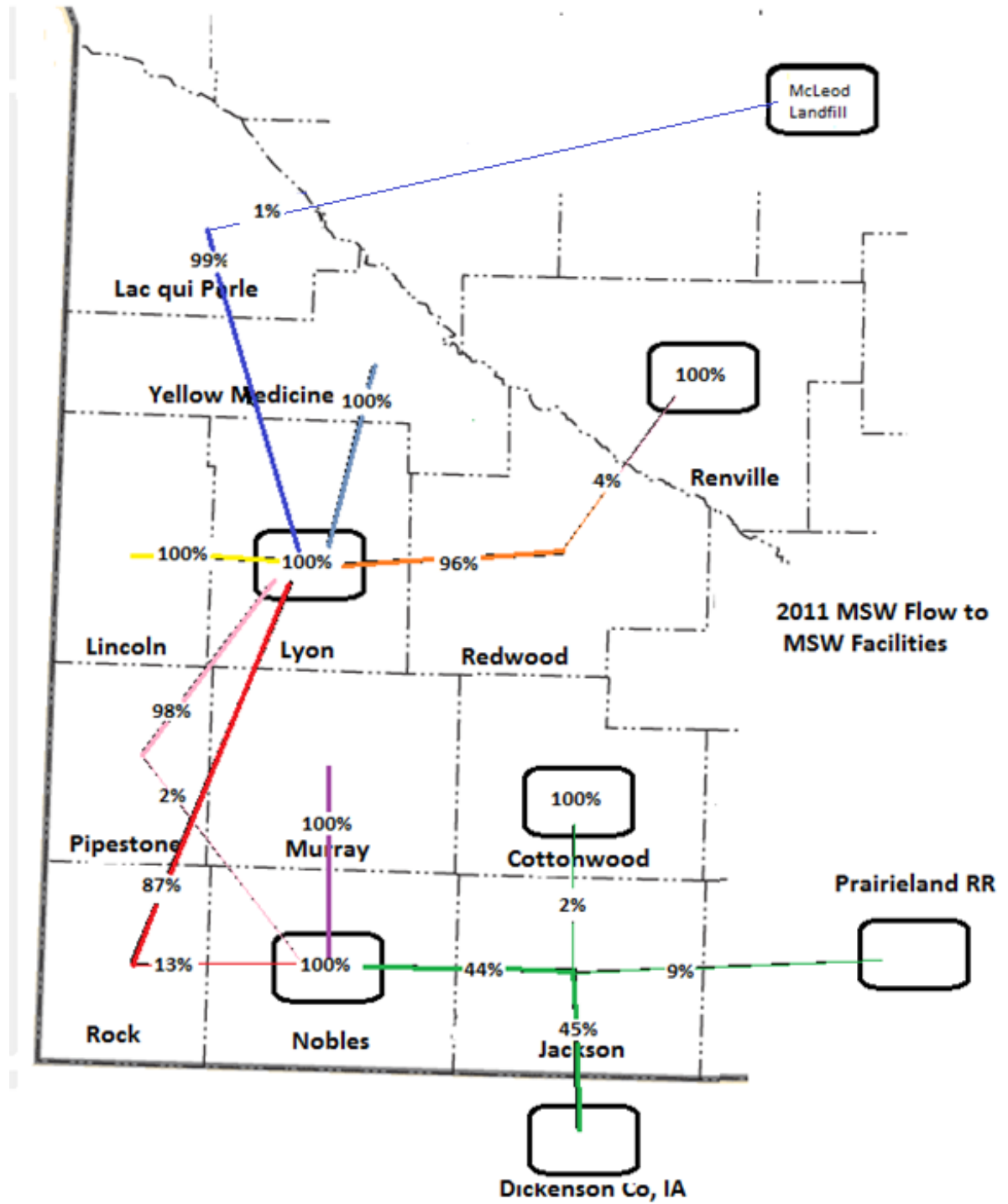


Figure 7: Percentage of MSW flow from county of origin to destination facility

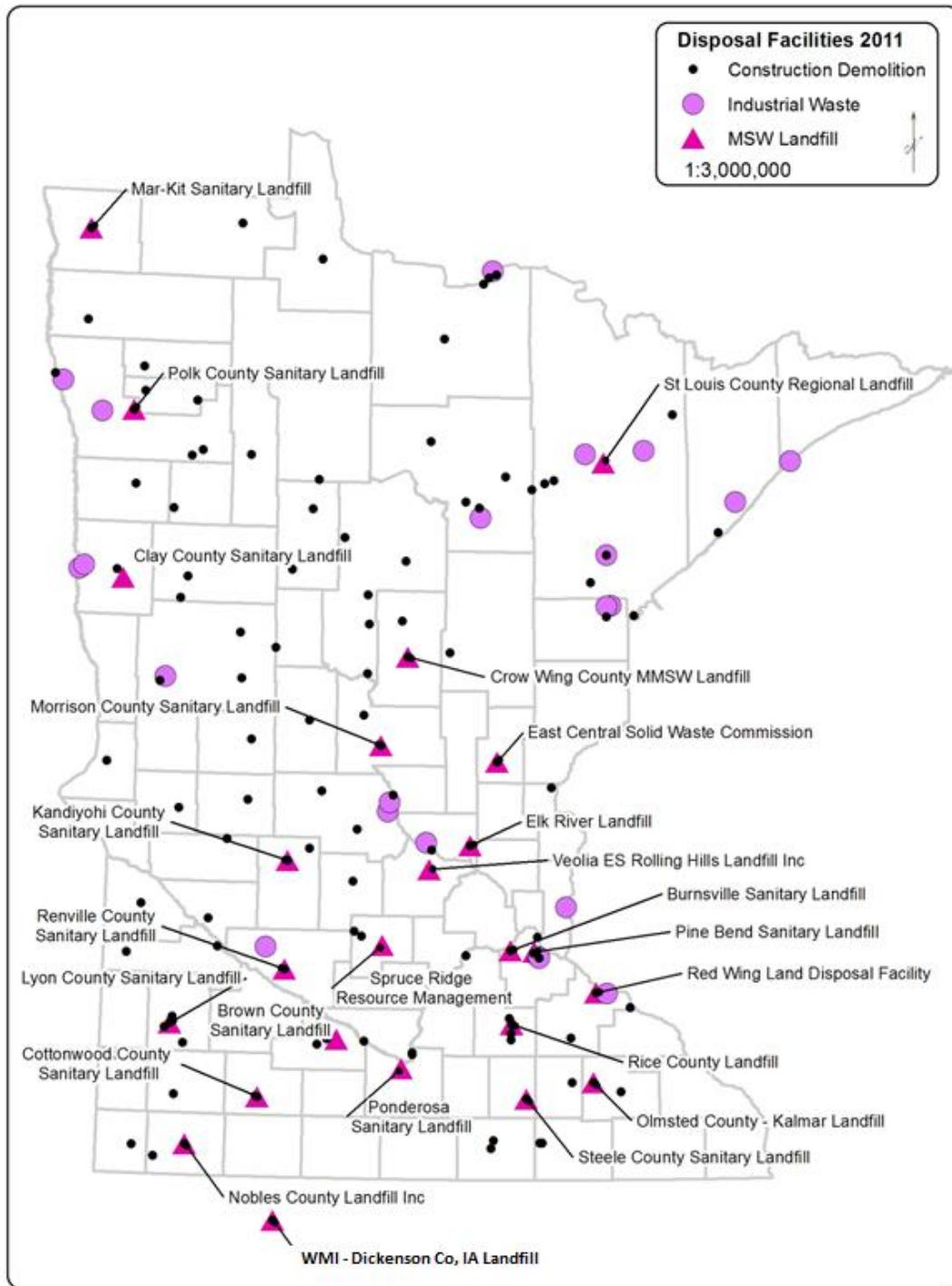


Figure 8: Disposal Facilities in 2011

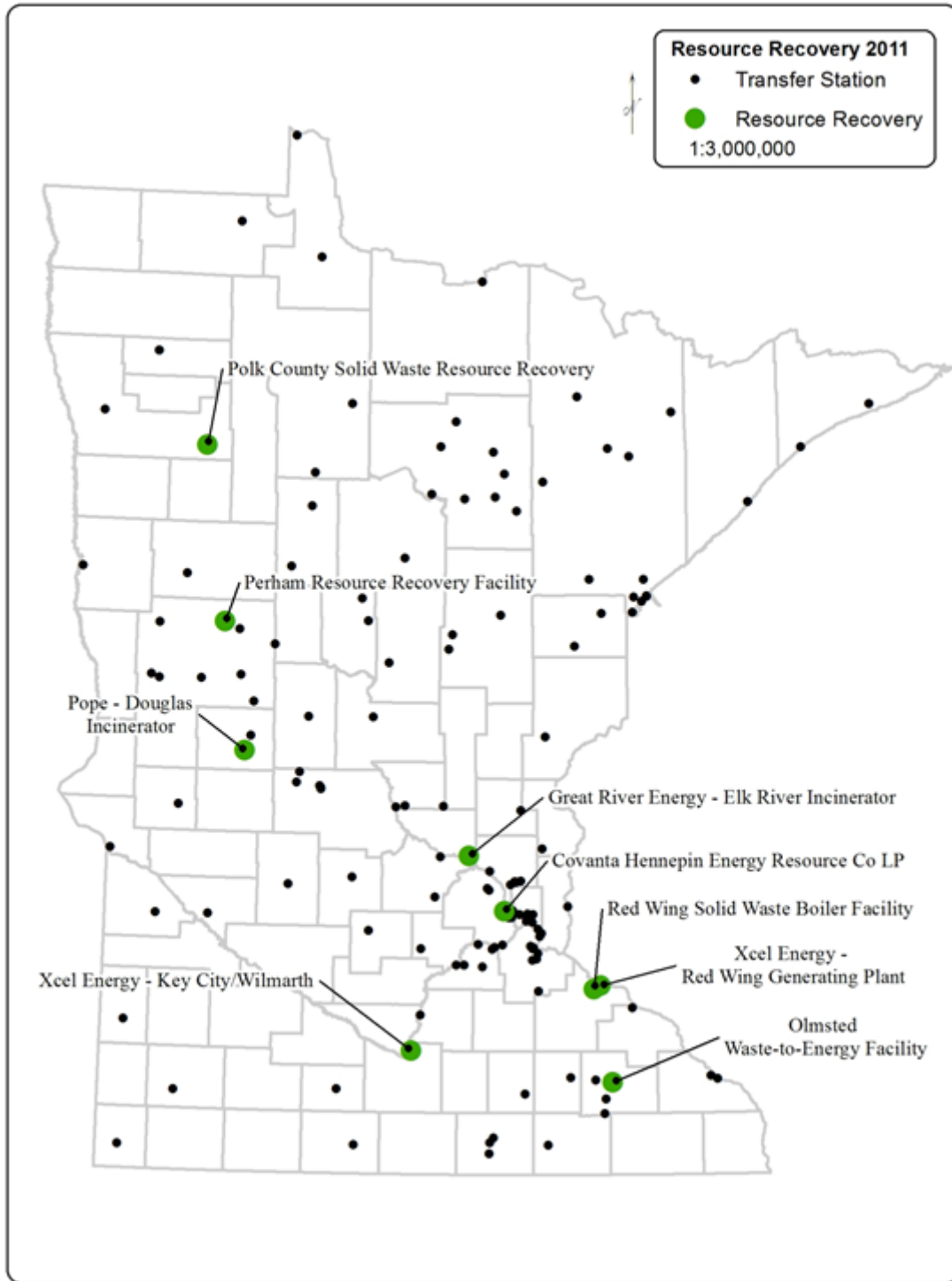


Figure 9: 2011 Resource Recovery Facilities and Transfer Stations in Minnesota⁴⁵

⁴⁵ Transfer stations in the SWRSWC Counties reflect transfer stations in operation as of December 31, 2012.

Counties and Minnesota Waste Combustion Facilities

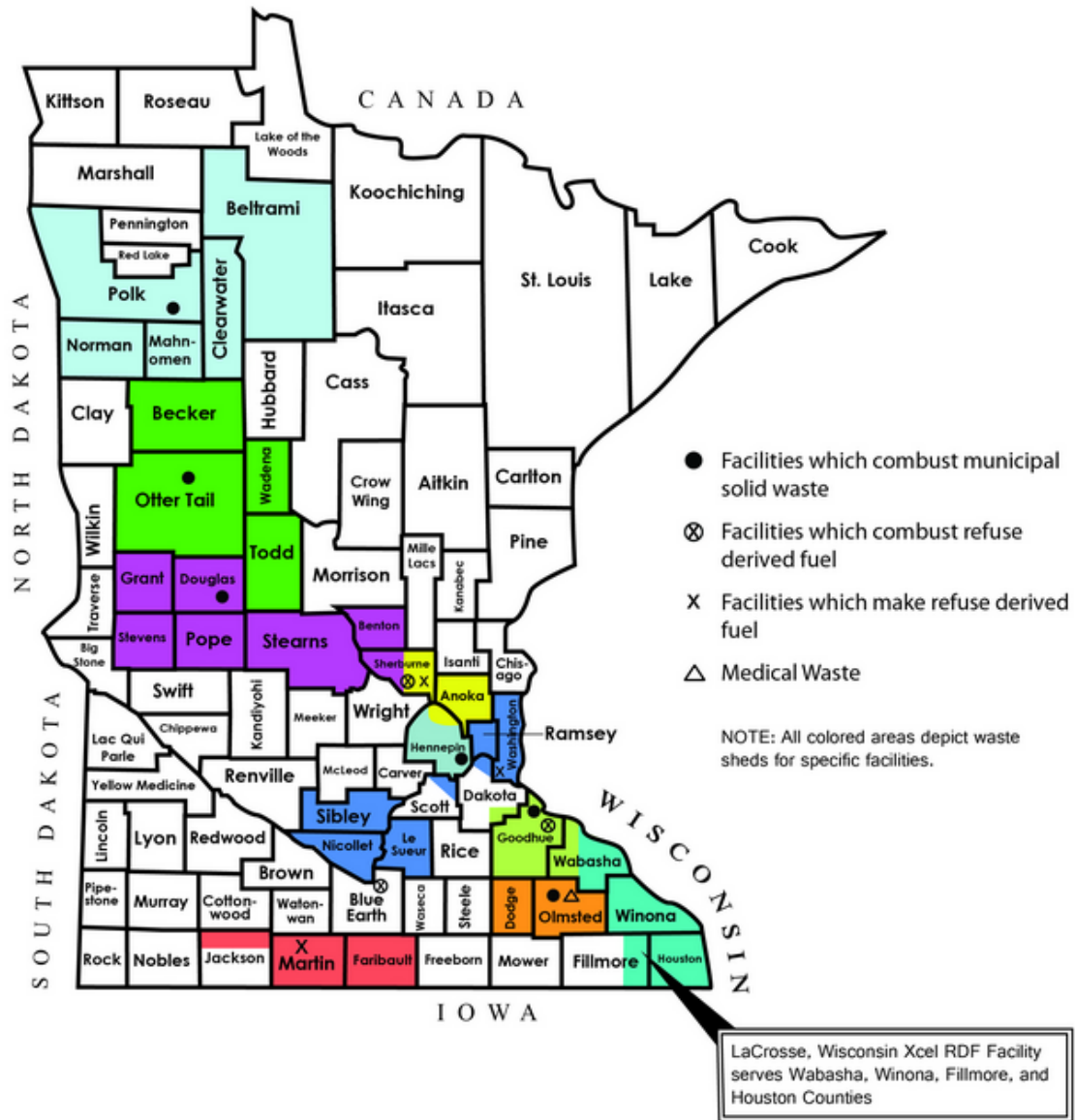


Figure 10: Waste Combustion Facilities in Minnesota

Source: MPCA

Table 28: Total MSW (tons) generated and MSW Available for Resource Recovery and Landfilling, by County and Disposal facility / site (2011).

2011 Solid Waste Totals	Total MSW Generated ⁴⁶	MSW Available for RR / LF	Cottonwood LF	Lyon Regional LF	Nobles LF	Renville LF	WMI (IA)	McLeod Co Landfill	Prairieland Resource Recovery
Cottonwood	13,432	8,593	8,593	0	0	0	0	0	0
Jackson	11,721	6,903	104	0	2,815	0	2,872	0	605
Lac qui Parle	7,331	3,328	0	3,300	0	0	0	29	0
Lincoln	3,361	1,986	0	1,986	0	0	0	0	0
Lyon	37,014	18,538	0	18,537	0	0	0	0	0
Murray	6,328	3,446	0	0	3,446	0	0	0	0
Nobles	22,958	11,087	0	0	11,087	0	0	0	0
Pipestone	9,675	4,092	0	4,000	92	0	0	0	0
Redwood	15,084	6,243	0	6,000	0	243	0	0	0
Renville	13,384	8,162	0	0	0	8,162	0	0	0
Rock	7,130	4,104	0	3,560	544	0	0	0	0
Yellow Medicine	9,532	4,391	0	4,391	0	0	0	0	0
Region	156,443	80,873	8,696	41,774	17,984	8,405	2,872	29	605

Source: County Goal Volume Tables

⁴⁶ MSW Generated includes Landfilled, Resource Recovery, on-site disposal and recycling; MSW Available for RR / LF includes Resource Recovery & Landfilling only

III a. Solid Waste Management Policies and Goals.

The goal of the SWRSWC and member counties is to foster an integrated approach to solid waste management in the region and to follow the order and preference of waste management strategies identified in 115A.02 [Minnesota Waste Management Act]. The intent of the SWRSWC and member counties is that they cooperate in a joint venture to provide the greatest public service benefit possible for the entire contiguous twelve (12) county area encompassed by the Counties in planning, management, and implementation of methods to deal with solid waste in southwest Minnesota.

The SWRSWC and member counties support policies and implementation measures that result in a cost effective, timely, and prudent management of waste in the region, including research and feasibility for implementation of: 1) Waste reduction and reuse; 2) Waste recycling; 3) Composting of source separated compostable materials, including but not limited to yard waste and food waste; 4) Resource recover through mixed municipal solid waste composting or incineration; 5) and disposal which produces no measurable methane gas or which involves the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale; and 6) Land disposal which produces measureable methane and which does not involve retrieval of gas as a fuel for the production of energy to be used on-site for sale.

The SWRSWC and member counties are to increase the public exposure to waste education. A key policy for implementation by the SWRSWC and member counties is to develop and implement a regional website that will provide educational material on reduce, reuse, and recycle opportunities in the region. Educational information includes how and where to recycle materials, how to dispose of HHW, how to dispose of special wastes and other banned materials, and how and where to dispose of MSW. The counties publicize disposal options for demolition waste and yard waste materials. The goal is to make sure that all residents and businesses know where and how to recycle or dispose of waste materials generated, including burn barrel information that addresses health and environmental information on why not to burn. Most of this information is disseminated through mailings and the media. A significant amount of information is given out through phone calls and emails from County Solid Waste Offices and the Recycling and Household Hazardous Waste facilities as well as information posted on county websites. County staffs in the SWRSWC area are available for phone calls and emails all year round to answer questions from the public regarding all solid waste issues.

III b. Historical Regional Development.

The development of the present system was based on several factors over time. Over time, the majority of the individual county landfills closed leaving four landfills operating among the SWRSWC Counties receiving about 96% of the collected waste and 3% going to two other landfills and 1% to a Resource Recovery facility.

Land disposal has been the proposed solid waste management system in each of the 12 county individual plans as the most prudent and feasible system available to each of the counties, individually in the late 1980's – early 1990's. It was readdressed through the 1997 Regional Review of Alternatives (ROA) as well as in the ROA update in 2002. Throughout the past twenty years, alternative waste disposal systems have been studied for their feasibility of implementation. Results thus far have not

changed the method for disposal because options have not been financially feasible. While a holistic change in MSW disposal has not been feasible, many changes have occurred: HHW programs to remove toxics from the waste stream, increased education to help people make choices in their purchasing to reduce, reuse and to recycle, as well as volume based pricing of waste. The following provides a historical overview of system development on a regional level.

In 1971 and 1972, eleven of the SWRSWC counties had public or privately owned and operated MPCA permitted Sanitary Landfills. Lac qui Parle County had no permitted landfill. In 1984 the Lincoln County Sanitary Landfill stopped accepting MSW. Additional monitoring requirements made the operation of individual county landfills less financially feasible. Six more Sanitary Landfills stopped accepting waste in the early 1990's Jackson (1990), Murray (1991), Pipestone and Rock (1993), and Redwood and Yellow Medicine (1994). In 1994, the Minnesota Legislature enacted the Landfill Cleanup Act to ensure the proper closure and post closure care at permitted municipal sanitary landfill in Minnesota. Basically, any MPCA permitted mix municipal solid waste landfill that stopped accepting waste by April 9, 1994 could qualify and all seven of the closed landfills became part of the MPCA Closed Landfill Program between 1996 and 1998.

In the mid 1980's, many of the SW counties formed alliances with neighboring counties or groups of counties to work on solid waste issues, including planning, comparison of landfill facility rates, recycling, and problem material disposal.

- 1) 1985-1987: The counties in the West Central Region (**Yellow Medicine**, Kandiyohi, Meeker, **Redwood**, **Renville**, Swift, and **Lac qui Parle**) met to study the possibility for the development of a regional solid waste management plan. A consultant was hired to write individual county plans. The regional discussion ended when one of the participating counties built an MSW composting facility for use by their own county. In 1987, a Regional Solid Waste Management Plan was submitted to the Office of Waste Management for review. That Plan did not receive approval and each County subsequently returned to addressing its own solid waste issues.
- 2) 1986-1992: **Jackson, Lincoln, Lyon, Murray, Nobles, Pipestone, Rock** formed a 7 county task force, pooled their funds and hired consultants to develop their first county solid waste management plans. The original County Solid Waste Management Plans were approved at various dates between 1987 and 1992.
- 3) At this time, while the counties identified land disposal as the primary method of solid waste management, the alternative management method identified in 1989 was to join in the regional development of a waste to energy facility proposed for the Minnesota Corn Producers (MCP) in Marshall, Minnesota which would significantly reduce land disposal. The Counties of Lyon, Lincoln, Murray, Pipestone, Redwood, and Yellow Medicine participated in this endeavor. This Study also looked at regional MSW Composting facility and a Single Sort collection and processing program for Lyon County. In the late 1980's Jackson County was part of a study with the Prairieland WTE Facility. However they pulled out of the study in 1989.
- 4) 1989-1990: Cottonwood County worked independently to develop their County Solid Waste Management Plan.

- 5) In 1990, **Yellow Medicine**, Big Stone, **Lac qui Parle**, Chippewa, and Swift Counties began to investigate establishing a Joint Powers Agreement with regard to solid waste management. The initial objective was to pursue the concept of a regional landfill. The group also had preliminary discussions on other cooperative efforts including recycling and education. The group was unable to develop consensus on issues and the cooperative effort was discontinued.
- 6) In the early 2000’s Redwood County spearheaded the Lamberton WTE study. This was supported by the SWRSWC and the Rural Energy Task Force. The SWRSWC and many individual counties reviewed and participated in the Redwood County WTE facility feasibility study (Lamberton / North Redwood). While the endeavor had merit, the financial and economic difficulties prevented it from coming to fruition.

Table 29 outlines the dates of Solid Waste Management Plan approvals, adoptions, and amendments.

Table 29: County Plan approvals / adoptions.

	Plan Adoptions / approvals	Due dates
Cottonwood	1990, 11-6-2002	12-2013
Jackson	1992, 1997, 12-23-2002	12-2013
Lac qui Parle	1989, 12-23-2002	12-2013
Lincoln	1990, 1998, 7-8-2003	07-2013
Lyon	1991, 1997, 2002, 2-10-2004	02-2014
Murray	1992, 1998, 1-14-2004	01-2014
Nobles	1992, 1993, 1998, 2004, 11-9-2009.	11-2019
Pipestone	1998, 8-5-2003	08-2013
Redwood	1998, 2-11-2004	02-2014
Renville	1990, 2001, 2-10-2009	02-2019
Rock	1997, 12-2-2003	12-2013
Yellow Medicine	1992, 5-2-2004	04-2014

2011-2012. The counties of Cottonwood, Jackson, Lac qui Parle, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Renville, Rock, and Yellow Medicine are part of a joint powers board, referred to as the Southwest Regional Solid Waste Commission (SWRSWC). The SWRSWC Counties are all located within an 18 county Southwest MPCA Region. These counties, predominantly agricultural in nature and sparsely populated, created a cooperative goal to foster an integrated approach to solid waste management within the region. The SWRSWC established a materials exchange program for all 12-member counties and is linked with the Minnesota Technical Assistance Program statewide and promotes the purchase of recycled content material. The SWRSWC has also cooperated collectively on several OEA / MPCA grants since its inception.

III c. Description of Existing Resource Recovery Programs or Systems in Use.

One percent of the collected waste in the SWRSWC area is processed at the Prairieland Resource Recovery Facility. The Prairieland Resource Recovery Facility processes its waste into RDF and is then transported to Mankato. Figure 9 represents facilities that make RDF and identify Waste Combustion Facilities in Minnesota. Prairieland Solid Waste Management Board is a Joint Powers board between Faribault and Martin Counties. The Facility processes the MSW into Refuse Derived Fuel (RDF). The RDF is transported to Mankato and used as fuel for Xcel Energy's Wilmarth Power Plant. They have two rates: In County (Faribault and Martin Co) = \$35 a ton tipping fee, plus a \$40 Hauler Collected Service Fee. \$75 total and Out of County = \$80 per ton. They are currently in the process of attempting to take in waste from other counties. Depending on the volume, they plan to have a tipping fee around \$65 per ton for all waste.

In 1991, Faribault and Martin County opened the Prairieland Compost Facility. The Prairieland Facility represents a primary component for meeting Martin County's goals to: *Conserve the need for land disposal through reducing the waste stream, and; Recover resources from the solid waste stream.*

The Prairieland Facility diverted waste from the landfill and through the production of RDF. The facility is compatible with the Prairieland Solid Waste Board's waste reduction, waste education and recycling programs and benefits these programs. The Prairieland Facility separates and recovers both recyclables and RDF from the waste stream. This process reduces dependence on landfills.

Existing Programs. The Prairieland Facility, which began operations in September 1991, operates 8 hours per day, 5 days per week and has a permitted process capacity of 50,000 tons per year (190 tons per day). The Prairieland Facility currently receives waste from Faribault and Martin Counties. The Prairieland facility operations are described in detail in Chapter III of this plan.

The Prairieland RDF Facility operates under MPCA permit #357. A permit reissuance application was submitted to the MPCA in September of 2011. The new permit was issued on March 6, 2012, and the expiration date is March 6, 2017. The current permit allows for the increase of capacity at the facility from 100 tons a day to 190 tons per day.

Regional Planning. The Prairieland Board recognizes the need to evaluate and consider solid waste management alternatives, including regional solutions for landfill abatement. The County and Prairieland Solid Waste Board are concerned about the rising cost of waste management, the environmental impacts of land disposal, long-term waste abatement solutions, and achieving waste reduction and recycling goals set by the state. Regional cooperation and planning reduce the landfill capacity needs throughout the region and increase the recovery of resources. The permitted capacity of the facility is 50,000 tons per year.

Currently, Faribault and Martin Counties MSW accounts for approximately 16,000 tons per year. Prairieland will attempt to fill the remaining 34,000 tons of capacity by securing waste from outside of the two counties. If Prairieland is able to secure waste from outside of the two counties, it may be possible to reduce the tip fee.

III d. Description of Land Disposal Facilities in use.

There are six land disposal facilities in use by the SWRSWC Counties. Four are located within the SWRSWC Region; one is in McLeod County, and one in Dickenson County, Iowa.

Cottonwood County Landfill. Ten percent (10%) of the SWRSWC area MSW was disposed of at the Cottonwood County Landfill in 2011 (8,697 tons). The Facility is located on the northern 40-acre section of property owned by Cottonwood County, approximately six (6) miles northwest of the City of Windom, Minnesota. The legal description of the site is the NE ¼ of Section 31, Township 106N, Range 36W, in Dale Township. The Tipping fee is \$53.31 per ton.

Prior to 1993, a 14-acre unlined cell located on the southern two-thirds of the site was used to dispose of municipal solid waste (MSW). In the fall of 1992, this unlined area was capped in accordance with the Minn. Solid Waste Management Rules with an MPCA approved clay cap.

Starting in 1993, the first Subtitle D approved cells were used to handle MSW at the landfill on the most northern portion of the landfill site. Currently, one (1) clay-lined and six (6) clay/ geomembrane lined cells have been constructed with a leachate collection systems and lysimeters to monitor leakage below the primary liner system.

Demolition debris is being disposed in a cell southeast of the MSW cells at the site. The construction of these cells was performed in accordance with the landfill's permit, SW-143. Cottonwood accepts asbestos in the demolition landfill.

As of fall of 2011 the landfill has received final cover over cells through the east half of Cells 4 and 5 and the southern half of Cell 5. A newly constructed Cell 7 is now accepting waste. During the development of the Regional Plan, a compacter was purchased to compact the waste at the MSW facility.

Lyon County Regional Landfill. Fifty-four (54%) percent of the SWRSWC area MSW was disposed of at the Lyon County Landfill in 2011 (45,007 tons). The tipping fee was \$45 per ton plus tax. The Lyon County Landfill is located on an 80 acre plot in the N½ of SE ¼ of Section 9, T110NR42W (Lyons Township) in Lyon County Minnesota, approximately 10 miles SW of Marshall off of State Highway 23. The Lyon County Landfill was initially permitted on December 19, 1970. The Lyon County Regional Sanitary Landfill opened in 1971 and was privately owned and operated by Lyons Sanitary Landfill, Inc. In November, 1986, Lyon County purchased the landfill property from Lyon's Sanitary Landfill, Inc., and contracted with them to continue operation of the landfill until Oct. 1992, at which time the County assumed operation of the landfill.

The landfill was originally permitted for 1,800,000 cubic yards of capacity of which all has been filled. New 5 year permits were issued to the County in 2002 and 2008 which expanded beyond the original permitted volumes. The new permitted capacity for both the lined and unlined area is currently 50 (19 unlined, 31-lined) acres of the 80 acres site that is designated for mixed municipal solid waste (MSW). An environmental review was completed in 2008 which looked at future landfill expansion. This review encompassed the existing landfill site as well as expansion to the west and would provide for an ultimate capacity of 9,414,402 CY.

The Phase 1 lined cell (4 acres) was constructed in 1993; Phase 2 (2.5 acres in 1994); Phases 4 - 6 were

constructed in 1996, 1998 and 2000 and were 2.5 & 3.0 acres each and completed the original permitted capacity. This permitted capacity extended through Phase 7 and Phase 9 construction. This 6 acre lined area was constructed in 2002 and an 8 acre lined area was constructed in 2008.

In 1992, Lyon County purchased a 200 foot strip of land on the north and west sides of the landfill to be used for the environmental monitoring (EMS) compliance boundary.

In 1993, Lyon County along with Lac qui Parle, Yellow Medicine, Lincoln, Redwood, Pipestone and Rock Counties developed a regional contract that allowed these counties to use the Lyon County Landfill. Current contracts with the counties provide for a rebate of \$5.00/ton for use of waste abatement programs.

In 1997 and 1998 the County purchased additional land for future construction/operations and buffer.

In 2010, the County installed gas collection lines in Phases 5-7 and a gas flare to collect landfill gas. This system began operation in late 2010.

Nobles County Landfill . Twenty-two (22%) percent of the SWRSWC area MSW was disposed of at the Nobles County Landfill in 2011 (17,984 tons). Current tip fees are \$50.00 per ton plus tax for MSW.

The MPCA approved a permit for the Nobles County Landfill in 1970 located at the corner of 220th Street and Knauf Ave as a privately owned landfill under permit SW-11. The permitted landfill site occupies 63.8 acres in the N ½ of the NE ¼ of Section 4, T102N, R41W of Dewald Township in Nobles County, approximately 10 miles northwest of the city of Worthington. The landfill serves the needs of Nobles County and adjacent counties for the disposal of mixed municipal solid waste.

The landfill consists of two areas of waste placement. The western 17 acres of the site were operated from 1970 to 1983. In 1983, a 16 acre area was permitted. The new permitted area adjoins and extends eastward from the area operated from the previous 1970 – 1983 area. The new 1983 permitted area consists of four phases of development. Waste is currently being placed in the phase IV area.

In 1999, Waste Connections based in California bought Schaap Sanitation located in Worthington, MN from Ron Schaap and still continue to use the name Schaap Sanitation.

Renville County Landfill. Ten percent (10%) of the SWRSWC area MSW is received by the Renville County Landfill in 2011 (8,405 tons). The tip fee was \$50 per ton plus tax.

The Renville County Sanitary Landfill was originally permitted and constructed in 1972. With a long term goal for the future in mind, Renville County was one of the first facilities in the state to complete an Environmental Assessment Worksheet (EAW) and receive a permit from the MPCA for the construction of a state-of-the-art lined disposal area. The MPCA approved the amended permit for the landfill in November 1991. Construction began on the new cell in 1993, and in May 1994, the last portion of the unlined area at the facility was closed. Development of the facility has continued. Cell 2 will be closed in 2007 and MSW is now being placed in the third cell. Currently, Renville County is in the process of re-permitting its landfill. A fourth (final) cell will be developed when needed.

McLeod Co./Spruce Ridge Landfill. Point zero three percent (0.03%) of the SWRSWC area MSW is disposed of at the McLeod County Landfill. The Spruce Ridge Resource Management Facility (SRRMF),

located approximately seven miles northwest of Glencoe on US Highway 22, is of key importance to McLeod County. Private ownership of the landfill has provided more than 25 years of economic waste disposal. The SRRMF has become one of the largest landfills in the state of Minnesota and the County continues to work with Spruce Ridge to extend the life of the landfill to ensure a continued resource for the community.

The waste haulers licensed in McLeod County generally utilize SRRMF for waste disposal. The landfill is privately owned and operated by Waste Management, Inc. The SRRMF serves not only the County of McLeod, but also accepts MSW from more than 25 counties within the State of Minnesota. The per ton tip fee at the landfill is \$64.14. The tip fee is comprised of a \$45.00 base fee, 17 percent Solid Waste Management Tax of \$7.65, \$6.66 Greater Minnesota Landfill Clean-up Fee, \$1.50 County fee, and \$3.33 Rich Valley Township fee.

Spruce Ridge operates an on-site collection center for problem wastes (i.e., tires, appliances, electronics, C&D debris, etc.) as well as recyclable materials. No processing other than bulking/baling occurs at SRRMF. Signs at the gate clearly indicate that problem materials, including hazardous wastes, are prohibited from entering the facility. All landfill operators are MPCA-certified to recognize problem materials.

Dickenson County, Iowa Landfill. Three percent (3%) of the SWRSWC area MSW is received at the Dickenson County, Iowa Landfill in 2011 and has a \$56 per ton tip fee.⁴⁷

The Dickinson County, Iowa, Sanitary Landfill is permitted by the Iowa Department of Natural Resources for disposal of MSW. The landfill is located near Arnolds park, Iowa, 2.5 miles East of Highway 71, on Dickinson county Road A-31. The landfill accepts MSW, demolition debris, appliances, and asbestos waste. Both the permitted capacity and the design capacity of the landfill are 6,223,000 cubic yards. In 2009, the landfill received 33,861.11 tons⁴⁸ and was receiving an estimated 108 tons per day (6 day week). The projected life of the landfill is 125 years.

The landfill commenced operation in 1975 and was owned and operated by Empire Construction Company. In 1991, Sanifill, Inc., a national solid waste management company purchased the landfill. After the purchase, improvements were made to the facility including creation of a solid waste management plan, a hydrogeological study, installation of a groundwater monitoring system, a leachate collection system, a scale, and a new composite lined cell with leachate control. The cell commenced operation in 1995. Sanifill, Inc. merged with USA Waste Services, Inc. in 1996. Both the current cell (Phase B) and the previous cell, (Phase A) are lined with subtitle D approved liner and are equipped with a leachate collection system that pumps leachate into a concrete lagoon. All improvements were approved by the Iowa department of Natural Resources.

III e. Costs associated with operating and maintaining the system.

Detailed costs associated with operating and maintaining the integrated solid waste management system can be found in the county budgets located Appendix A.

⁴⁷ Jackson County has a contract with WM and waste goes to Dickenson County facility (contract in Appendix)

⁴⁸ <http://www.iowadnr.gov/Portals/idnr/uploads/waste/fy2012data.pdf>

Table 30: Costs Associated with Operation and Maintenance of MSW Facilities

	Landfill O&M	Transfer Station O & M	HHW Facility	Recycling Facility
Cottonwood County 2011	x		x	x
Jackson County 2011			X	
Lac qui Parle 2011		X	X	
Lincoln Co Transfer Station		\$45,000		
Lyon County Landfill 2011	\$2,596,000		\$168,000	\$367,000
Murray County		X	X	X
Nobles County	X		X	X
Pipestone County 2011			X	
Redwood County			X	X
Renville County 2011	\$455,000		\$73,000	\$180,000
Rock County 2011		X	X	X
Yellow Medicine County			X	
Prairieland Resource Recovery Facility 2012				
McLeod County	For 2012, the County estimated its expenses for solid waste administration, abatement, recycling, and HHW programs at \$1.7 million and include the County's financial commitment to the privately owned and operated facilities: Creekside Soils and SRRMF at not to annually exceed \$29,466 and \$2,600 respectively.			
Dickenson County				

III f. Summary of the achievements, opportunities, challenges, or problems with the existing system, including, but not limited to, market and economic conditions, availability of resource recovery programs or facilities, and the availability of local and state funding resources.

Market and Economic Conditions Related to MSW

As discussed in Part II, most of the MSW generated in the SWRSWC area is disposed of at four landfills within the planning area: Cottonwood County Sanitary Landfill, Lyon County Landfill, Nobles County Landfill, and the Renville County Landfill.

As shown in Table 12, between 2007 and 2010 the tons of MSW generated and disposed decreased each year, most likely due to the economic downturn. In 2011, the tonnage of the Regions waste increased and there was an increase by 15% of the tons of MSW being landfilled from the previous year. Part of the volume increase was likely from a decrease of on-site disposal (decreased by 25%) This is the same time frame where the SWRSWC Counties initiated a burn barrel campaign which likely had an impact on the decrease of on-site disposal.

Market and Economic Conditions Related to Recycling

Market conditions are cyclical. Local recycling programs focus on using local markets which in turn benefit the local economy and contributes to job creation. Murray, Redwood and Renville Counties use local markets whenever possible for the sale of its recyclable commodities, based on the availability of those markets. Several commodities are marketed to out-of-state vendors.

There are service providers who market outside of the area to other areas of Minnesota or out of state.

The preference is to select vendors based on market values offered, references, availability, economic feasibility to transport, and environmentally-responsible practices in the production of recycled-content products.

Availability of Resource Recovery Programs or Facilities

One county in the SWRSWC area has consistently had waste flow to the Prairieland Facility, once a composting facility now converted to RDF. The consistent volume of waste transported to the Prairieland facility suggests the waste shed from Jackson County makes it physically close enough to offset transportation costs for more distant landfill facilities and they have additional capacity to accept waste. The SWRSWC Counties will continue to monitor the feasibility of utilizing existing or constructing a new resource recovery facility. The Prairieland Facility has indicated that they have the capacity to accept more volume of MSW through their facility.

Availability of Local and State Funding Resources

The SWRSWC and member counties do strongly support increases in SCORE, which would be used for the expansion of regional and county efforts in promoting solid waste reduction, and to increase efforts of recycling through expanded outreach to residential and commercial and industrial generators through recycling education and solid waste audits. The SWRSWC Counties currently rely on SCORE grants, solid waste assessments and / or general funds to partially fund its solid waste abatement programs. There have been no increases in SCORE funding since its creation, so the County must rely on other funding sources including landfill tip fees, property tax assessments, and the sale of recyclable materials. Additional dollars would augment regional and county efforts and development of programs that would promote reduction of the amount of waste generated, increase recycling and outreach (audits and education) to residential, commercial, industrial generators.

IV. PROPOSED INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

It is the goal of the State of Minnesota to foster an integrated waste management system to protect the state's land, air, water, and other natural resources, and the public health. The following waste management practices are listed in the state's order of preferred implementation:

- 1) waste reduction and reuse;
- 2) waste recycling;
- 3) composting of source-separated compostable materials, including but not limited to, yard waste and food waste;
- 4) resource recovery through mixed municipal solid waste composting or incineration;
- 5) land disposal which produces no measurable methane gas or which involves the retrieval of methane gas as a fuel for the production of energy to be used on-site or for sale; and
- 6) land disposal which produces measurable methane and which does not involve the retrieval of methane gas as a fuel for the production of energy to be used on-site or for "sale".

The goal of the SWRSWC is to ensure that member counties of the SWRSWC consider all landfill abatement, processing, and resource recovery options available during the planning period. In choosing a solid waste processing or disposal system, long-term environmental and financial decisions and commitments must be made. Any action, or inaction, can have significant economic impacts on present and future citizens in the planning area.

On March 9, 1994 the SRSWC adopted a resolution to develop a comprehensive analysis of solid waste management alternatives for solid waste generated within the region. This analysis met the state's criteria established in statute and rule and was included as Chapter III in all of the individual member's county plans as they were updated during that time period. The SRSWC adopted this alternative document on March 18, 1997 and was updated in 2002.

The updated analysis concluded that continued landfilling was the most prudent and feasible solid waste disposal alternative, after waste reduction, reuse and recycling at this time. The SWRSWC counties have named the following preferred disposal facilities in Table 31.

During the early 2000's, Redwood County spearheaded the Lamberton WTE study with a potential energy park at Lamberton. The concept was supported by both the SWRSWC and the Rural Energy Task Force.

Since the last Review of Alternatives Update, the counties have continued to keep their options open for MSW alternatives. Lyon County retained RW Beck to conduct a study of MSW processing in 2009. The objective of the study was to provide the County with detailed operations, permitting, and planning level cost information, as well as recommendations on two waste management options: 1) MSW shredding with subsequent landfill disposal at the Lyon County Sanitary Landfill, and 2) production of refuse derived fuel with two options use as fuel on-site at the facility and subsequent transport off-site for use to generate energy. Implementation tools the SWRSWC will consider to assist in addressing waste management issues include waste assurance, mandatory recycling, on-site disposal, and other tools.

Table 31. Distance to Preferred Disposal Facilities and Distance from Landfills to Disposal Facilities

		Distance to Preferred Disposal Facilities are in bold ⁴⁹					
County	Preferred disposal facility	Cottonwood County Landfill	Lyon County Landfill	Nobles County Landfill	Renville County Landfill	Dickinson WMI Landfill Spirit Lake, IA	Prairieland Facility Truman, MN
Cottonwood	Cottonwood County Landfill	0	73	47	68	44	45
Jackson	Dickinson WMI Landfill					25	
Lac qui Parle	Lyon County Landfill		68				
Lincoln	Lyon County Landfill		37				
Lyon	Lyon County Landfill	73	0	63	65	105	110
Murray	Nobles County Landfill			29			
Nobles	Nobles County Landfill	47	63	0	107	57	83
Pipestone	Lyon County Landfill		35				
Redwood	Lyon County Landfill		40				
Renville	Renville County Landfill	68	65	107	0	104	83
Rock	Lyon County Landfill		62				
Yellow Medicine	Lyon County Landfill		36				

⁴⁹ Counties with a landfill, the distance is from landfill to landfill; Counties without a landfill are measured from the center of county to destination landfill.

Table 32 represents the financial side-by-side comparison indicated the capital cost for the RDF production would be higher at nearly \$6.9 million and MSW shredding at \$4.5 million; annual costs were significantly higher for the RDF production but the revenue and avoided costs were also greater than the MSW shredding. Overall, both MSW shredding and RDF production show an annual fiscal loss.

Table 32: Lyon County MSW shredding vs RDF Production Comparison of Cost Estimates⁵⁰	MSW Shredding w landfilling	RDF Production, Off site sale
Total capital cost	\$4,467,880	\$6,846,757
Total annual costs	\$996,548	\$2,533,003
Total revenue and avoided costs	\$552,626	\$2,277,522
Annual Profit (Loss)	(\$443,922)	(\$255,481)
Incremental Cost per processed ton (based on 40,155 ton MSW in 2018)	(\$11.06)	(\$6.36)
Incremental Cost per processed ton without RDF fluff revenue	NA	(\$29.11)

The study recommendations were to:

- 1) Further study the MSW shredding if the County establishes a viable Landfill to Gas Energy Project to determine if the cost is justified by the increase in revenue.
- 2) Initiate discussions with POET's ethanol plant near Chancellor, SD regarding interest in RDF for boiler fuel.
- 3) Visit one or more RDF plants.

As the SWRSWC Counties seek alternative solid waste management systems in the future by directing waste to another facility, an amendment to the SWRSWC Solid Waste Management Plan will be prepared and submitted to the MPCA for approval.

LANDFILL ALTERNATIVES

Short Term Alternatives: In the event of a short term emergency at one of the four County Landfills requiring diversion of the waste, the first course of action that will be taken is to contact other facilities within its vicinity to determine the best disposal option for the facility, based on available capacity, transportation access, operating factors and cost.

Pursue landfill reciprocity agreement. In the event MSW cannot be accepted at one of the four landfills in the SWRSWC area (Lyon County, Renville County or Cottonwood County), reciprocity arrangements have or will be made for the disposal of this waste at the other MSW Landfills to accept the MSW.

The nature of reciprocity agreements is to allow waste that would ordinarily be delivered to a specific facility to be delivered to other facilities. The agreement also provides for financial terms. If for example the Lyon County Sanitary Landfill is not available for a short term period, the counties participating with the Lyon County Sanitary Landfill will allow the reciprocity agreement to operate, and the waste to be delivered to any of the other three regional landfills.

⁵⁰ Feasibility Study of Alternative options for MSW Management; Lyon County, MN Final Report August 2009.

Other reciprocity agreements: Renville County has an agreement with Kandiyohi County to divert waste between their landfills in an emergency

Long-Term Alternatives: In the event new long-term disposal arrangements are needed for any of the SWRSWC Counties, the County staff (Environmental Director / Solid Waste Administrator / Public Works Director), or the Joint Powers Authority (Redwood-Renville) would begin the process of collecting proposals and offers from disposal/processing facilities interested in the acceptance of MSW from the Counties or Solid Waste Authority. Proposals, once accepted, would be reviewed with the respective Boards of Commissioners / Joint Powers Authority, and may include input from the private haulers. The proposals would be evaluated based on costs, transportation distances, need for transfer facilities, potential liabilities to both the County and its residents, and the ability of assisting other local units of government located within the SWRSWC area. Instruments to address or implement new disposal arrangements include waste assurances, contracts, ordinances, and other tools.

Refer to Section III of this document for the existing conditions of the following resource recovery facility: Prairieland RDF Facility

Refer to Section III d of this document for the existing conditions of the following landfills: Lyon County MSW Landfill, Cottonwood County Landfill, Renville County Landfill, and Nobles County Landfill.

Fairmont Energy Park Proposal (Proposed Resource Recovery Facility)– As of 2012, according to the EAW, the proposed facility consists of the installation of four new 6,520 kilowatt Caterpillar natural gas fired electrical generating units within a new building at the existing facility location. The four new units will be used for peak-shaving and emergency purposes. The proposed Project would increase the facility's electrical generating capacity from 14.4 to 40.5 (nameplate) megawatts. . At this time the proposer has dropped further study.

Regional Review of Alternatives. The twelve counties of the Southwest Regional Solid Waste Commission developed a Regional Review of Alternatives. They completed the Review of Alternatives in January, 2002. All member counties Boards of Commissioners adopted the findings and recommendations of the Review of Alternatives and incorporated the County solid Waste Management Plans. As identified in the Regional Review of Alternatives, there is currently no solid waste management system more feasible and prudent than the land disposal system.

Although the study is twelve years old the limitations remain the same and are still relevant. The SWRSWC and member counties will continue to explore and monitor the feasibility of waste to energy alternatives to reduce landfilling. The only alternatives available in this region at present are to increase recycling, composting and reduce the amount of waste being generated. Since organics is becoming a larger proportion of the waste stream, composting and source separating organics from the waste stream is an opportunity to reduce landfilling that will be studied by the SWRSWC during the ten year planning period.

V. POLICIES AND PROGRAMS: SOLID WASTE SYSTEM EVALUATION AND TEN YEAR IMPLEMENTATION PLAN

Introduction. Since the approval of the last round of County Solid Waste Management Plans⁵¹, each of the twelve Counties has worked hard to implement their abatement programs.

Regionally, the recycling rates achieved were at 38.4%% in 2007, and by 2011 the recycling rate increased to 40.3%. According to the Regional GVT, the SWRSWC will be at 55.2% recycling by the year 2022.

The State's goal is a 60% recycling rate by the year 2025, and the Region's goal is to reach a 55% recycling rate within ten years. The increased goal and the removal of credits for yard waste and source reduction is a challenge the SWRSWC and member counties will continue to address.

The SWRSWC and member counties will continue to work collaboratively on identifying ideas of waste abatement programs by analyzing and advance increase in recycling through additional recovery of currently landfilled recyclables. This will be done by researching and introducing additional items that could be recycled (with a focus on fibers as identified in the 50% Recycling Study); as well as the removal of toxics from the MSW that is landfilled. This will be accomplished through topic discussion for ideas at the SWRSWC meetings status reports, replicating successful individual county initiatives, technical advising from fellow County Solid Waste Administrators and staff, and state and regional agencies.

To measure the effectiveness of the programs being implemented, the SWRSWC will annually review the progress of the goals for landfill abatement, processing and resource recovery. This will be accomplished by an annual comparison of the SCORE Report with the GVT projections. Utilizing 2011 as base year data, recycling rates, MSW, HHW, and other wastes can be tracked and data trends can be evaluated each year to measure the success of programs and new initiatives. The SCORE Report is annually compiled by MPCA. The MPCA has developed a new RETRAC system to account for how waste is handled and will be incorporated into the SCORE data beginning in 2015 with the reporting of calendar year 2014 data.. The Law Enforcement agencies will also have available information on the volume of pharmaceuticals they taken for proper disposal.

The SWRSWC Counties will implement programs to satisfy the statutory waste reduction, recycling problem materials, and household hazardous waste program requirements as detailed in Chapter III. Chapter IV Identifies the overall proposed course of action for the most prudent and feasible solid waste management, processing and disposal system for the next ten years. Measurement of waste management (MSW volume, recycling, reduction, etc.) will be measured with an annual review of the SCORE data by the SWRSWC and SWA's and compare to initiatives that have been implemented to determine if there has been an impact. Often it takes more than a year of implementation before results are known.

Public Entities: Public Entities must ensure that their waste is managed in a manner consistent with a County's preferred methods for waste management, according to the state Public Entities Statutes (Minnesota Statute §§115A.46, subd. 5, and 115A.471). These statutes state that public entities manage

⁵¹ Last approval dates for County Solid Waste Plans: Cottonwood 2002, Jackson 2002, Lac qui Parle 2002, Lincoln 2003, Lyon 2004, Murray 2004, Nobles 2009, Pipestone 2003, Redwood 2004, Renville 2009, Rock 2003, Yellow Medicine 2004.

waste, or contract to have their waste managed, in a manner that is consistent with the county plan, unless they obtain the permission of the county to do otherwise.

The definition of public entities includes any of the following:

- 1) An office, agency, or institution of the state;
- 2) The metropolitan council;
- 3) A metropolitan agency;
- 4) The metropolitan mosquito control district;
- 5) The legislature;
- 6) The courts;
- 7) A statutory or home rule charter city;
- 8) A town;
- 9) A school district;
- 10) Another special taxing district; or
- 11) Any contractor acting pursuant to a contract with a public entity.

In order for these provisions to work effectively, the County can take a number of steps to further improve the ability of the Public Entities Statutes to achieve the desired result:

- 1) The county's waste management preferences should be clearly stated in the County's Solid Waste Management Plan.
- 2) Clearly articulate that only waste collected by or contracted for collection by a public entity is covered under this statute, and provide information to public entities that explains the benefits of this law to public entities.
- 3) The County can work closely with the State to ensure that the public entities law is enforced.

Numerous counties have sent letters to public entities, or the state has sent such letters, explaining what public entities must do to be consistent with the county plan. Counties have also requested assistance from the state in enforcement. Thus far, all public entity cases have been resolved with contact and assistance from the state. The state has not had to resort to using the state's formal enforcement procedure and penalties.

Consistent with this, the member counties of the SWRSWC hereby establish that waste reduction, recycling, composting, and landfilling at the landfill facilities identified in Table 36 is the preferred method for managing MSW, including but not limited to MSW collected or generated by Public Entities in the SWRSWC Counties.

V. a. Solid Waste Reduction

General Policies and Goals

Source reduction is the least costly and most desired waste abatement method. It is the goal of the SWRSWC and its member Counties to reduce the amount of waste generated by 1% per year through promotion, sponsorship and support of efforts that will expand, enhance or improve source reduction of waste in the Planning area.

- 1) SWRSWC and member Counties will annually review all efforts of public outreach as identified in the Communication Plan. Please refer to Part V.b. for more specifics on educational initiatives described below.
 - a. Educate the public, commercial, and industrial entities of the benefits of source reduction.
 - b. To promote and implement economic incentives to avoid the generation of waste.
 - c. To sponsor and support source reduction education, in the regions' schools and other youth organizations i.e. FFA, 4-H, Honor Society.
 - Examples of source reduction initiatives would be promotion of food waste reduction to children, farms, and businesses and connecting to local food shelves; kids growing food for school lunch programs and the WRAP program from Jeffers foundation that offers waste prevention activities for schools.
 - d. Pair with the Southwest Chambers of Commerce to advance waste reduction and offering waste audits is an example of new partnering of an existing organization and will be the first endeavor for connecting with existing organizations.
 - e. Seek local, state, or federal grant funding to advance source reduction priorities.
- 2) SWRSWC and member Counties will promote and review all efforts to reduce the amount and toxicity of waste.
 - a. Promoting and implementing material exchange opportunities for residents and businesses.
 - b. Educate residents about complete use of toxic materials and correct method of disposal.
 - c. Educate residents, businesses and units of government on the use and availability of non-toxic cleaning chemicals.
 - Lyon County Staff has been involved with the development of toxicity reduction messages.
 - d. The Solid Waste Administrators will be trained (by MnTAP in 2014) to conduct waste audits at businesses and government buildings, with a target of four audits per calendar year, beginning in 2015. The Solid Waste Administrators will also be offering this training to Chamber of Commerce staff to take part in the training. The purpose is so they may also provide this service, have familiarity with these efforts, and be in an informed position to promote the benefits of the waste audits.

- 3) SWRSWC and member Counties will serve as a good role model by:
 - a. Implementing waste reduction strategies in all County Government buildings.
 - b. Promoting and supporting waste reduction opportunities at all County facilities.
 - c. Implementing budgeting incentives to reduce the generation of waste.
 - d. Reduce paper use by 10% over the ten year planning period.
 - Measurement or documentation of past reduction activities (ie units of government have begun to implement paperless meetings, paperless contracts), however these have not been documented.
 - The counties will document the number # of reams of paper purchased to document the trend of how well paper use reduction is occurring at county offices throughout the planning period.
 - The counties will share both successful and unsuccessful county paper use reduction practices at the November SWRSWC meetings and advance successful projects in the region..
 - The SWRSWC will post strategies on the website designed to help other units of government, organization and businesses reduce their paper consumption.
 - The SWRSWC Member counties will follow state purchasing guidelines and contracts whenever fiscally beneficial
 - The SWRSWC and Member counties will post information on the website on how they are achieving this waste reduction goal.
- 4) SWRSWC and member Counties will strive to increase the amount of materials that could be reused / repurposed by 20% by 2022 and will support and assist entities within the region where their sole purpose is the reuse and repair of materials that would otherwise end up in the waste system.
 - a. Thrift shops, clothing shelters, and material exchanges – MN TAP.
 - b. Explore and evaluate the potential of reusing asphalt shingles as road material.
 - c. Connect with ReUSE Minnesota to bring visibility to the reuse, rental, and repair sector through networking, publicity, and events.
 - d. The SWA's include as an agenda item, reuse and repair for at least one meeting per year. The expectation will be to bring forward information of existing programs in the counties and updates on new programs used, in an effort to share and expand these opportunities.
 - e. The SWA's once trained to conduct waste audits will conduct a waste audit on county operations and report the findings back to the SWRSWC at their February Meetings.
- 5) SWRSWC and member Counties will monitor and gain an understanding of impacts of actions that result in product stewardship and beneficial use.

- a. Support applicable policy and legislation of specific product stewardship, i.e. County programs of paint exchange.
 - b. Encourage member Counties to participate in the Lyon County Industrial Waste Outreach program providing onsite outreach and technical assistance to businesses in the region.
- 6) SWRSWC and member Counties will study the best activities that will promote waste reduction in the region including:
- a. Fix-it clinics.
 - b. Choose to reuse month.
 - c. Reuse alliances.
 - d. Reuse areas at transfer sites and landfills.
 - e. Neighborhood reuse events.
 - f. Develop a directory of thrift stores in region for the public to use and post on the website. Work with the MPCA who is working to develop and maintain a statewide directory of thrift stores.
 - g. Develop and post on the website, and distribute to hospice and funeral directors a guide that directs people on where to take items for reuse; geared toward people who are relocating, downsizing, or families who need to disperse loved ones belongings.

Specific Individual Programs unique in individual counties, plan to maintain, expand, or continue to implement in next 10 years

Cottonwood: USAgain clothing boxes are located throughout the county by a private company and will continue. The county highway shop burns waste oil that is produced in the highway department, and this activity will continue.

Jackson: The Lions Club organizes and collects shoes for the “soles for souls” program.

Lac qui Parle: The used shoe and used clothing collection has been successful and will continue.

Lincoln: The used clothing collection has been successful and will continue

Lyon: The County will continue to implement waste reduction through the following programs: Education, problem materials management and regional collaboration. ^[1] Support VSQG program through the Lyon County regional facility. Continue to promote materials reuse through thrift stores (2) and clothing drop-off sites. Future reuse projects -the county will investigate reuse of asphalt shingles.

Murray: There is an annual Hospice Sale that generates more than 10 tons of materials for reuse. Future reuse projects the county will investigate for implementation is shoe recycling and reuse of asphalt shingles.

Nobles: The County has places for shoe drop offs for example St. Matthew Lutheran Church.

Pipestone: The County will continue to conduct business waste audits and encourage commercial recycling.

Redwood: The County will continue to promote re-use opportunities at area thrift shops, and focus on efforts individuals can make to cut down on the amount of garbage they “purchase”. In other words, the amount of packaging around products and products that are durable, not disposable. The County has been trying to promote environmentally preferable cleaning products etc. to county maintenance staff and highway department, with slow but gradual progress.

Renville: The County has been cooperating with two other consultants of southwestern Minnesota in a waste reduction program concentrating on commercial accounts. Motor oil for the Renville County Highway Department vehicles is purchased in barrels which are returned for reuse when empty. The County Weed Control Department receives their chemicals in containers which are recycled.

Rock: The County utilizes the Luverne Chamber of Commerce as a resource for businesses and government to post listings of surplus equipment such as office furniture and equipment. Rock County recently implemented a program that has saved paper used and staff time. The county electronic payroll and timesheets has eliminated all paper timesheets, approvals/authorizations, and paper checks with the direct deposit. This system also was implemented with a reduction in staffing at the courthouse, which has saved staffing time in the payroll process itself, as well as reducing costs.

Yellow Medicine: The County will continue and expand education opportunities for schools similar to Lyon County. Support local community groups such as Scouts, 4-H, and Technical College school groups. Support VSQG program through the Lyon County Regional facility. Continue to promote materials reuse through thrift stores (2) and clothing drop-off sites.

Annual Amount of Solid Waste to be reduced. Regionally, the amount to be reduced ranges from .06 to 2.5 %.

	Cot	Jac	LqP	Lin	Lyo	Mur	Nob	Pip	Red	Ren	Roc	YM
%	2	2	1	1	1	1.2	1	1	.06	1	2.5	1

Estimated Program Budget

Funding for this program is included in the individual county and aggregated regional budgets shown in the Appendix A. Source Reduction activities will primarily be financed through the SCORE pass-through grant, Solid Waste Assessment, county general fund revenues, MPCA funding, GMLCF Rebate, and landfill tip fees. If SCORE funds are eliminated, the County will assess how programs could be funded, and act in a fiscally responsible manner.

Responsible Persons and Required Staff time

The FTE by county and aggregated for the region is shown in Appendix A. In some cases, no hours are identified for “waste reduction” activities; however, the activities are concurrent with Solid Waste Education and Recycling activities. There were a total of 1.21 FTE positions reported for county Responsible persons. While most of the hours of the responsible county staff are for the Solid Waste Administrator (SWA) and SWA staff; other identified include HHW staff, landfill staff, secretary / office manager, sheriff’s office and others. This plan also recognizes other “non county” positions (either paid

by the county or not) who have responsibilities or impact the Waste Reduction Activities. They include the Prairie Ecology Bus Center (PEBC), contracted Recyclers, MSW Haulers, and City Staff. The next ten years lots change and as we ratchet up efforts individually and group will probably see needs change.

Over next ten years *of the planning period* as the SWRSWC builds upon its strength of the *member counties* working together, the SWRSWC is likely to find new needs and challenges that need to be addressed. A recent pairing with the Southwest Chambers of Commerce to advance waste reduction and offering waste audits is an example of new partnering of an existing organization and will be the first endeavor of connecting with existing organizations; seeking grant funding would be another choice for consideration.

Implementation Schedule

Summer/Fall 2014	SWA Training by MnTAP for business waste audits
2015 to 2022	The SWRSWC and member counties will conduct business waste audits to reduce waste generated at businesses, intuitions and government facilities.
2015	Documentation methods will be identified to track reduction activities.
January 1, 2015	Adopt and Implement SWRSWC Solid Waste Management Plan
June 2015	SWRSWC and / or SWA's establish subcommittees: Communications, C & I Audits; Education; Website / Social media; and others as deemed necessary.
2015 & annually	Review and approve the Communication Plan, at the meeting SWRSWC meetings
2015 to 2022	Annual review of all outreach identified in the Communication Plan at the November SWRSWC meetings
November 2015	First Annual report, and every year thereafter to report on the progress of waste reduction, results of meeting will be posted on website.
2015	Develop Solid Waste Management Plan Guidance document / Work Program
2015 to 2016	Develop and approve implementation of website
2016	Completion of first Guidance Document by the SWRSWC which will include waste reduction and reuse efforts and activities.
2017 to 2022	SWRSWC will update the Plan Guidance document to reflect needed changes to reach source reduction goals.

V. b. Solid Waste Education**General Policy and Goals**

The main goal of the SWRSWC and its member Counties is to educate the public to move waste up the waste hierarchy, and to assure environmentally sound and cost effective waste management system. An informed and aware populace will know the long-term effects of their purchasing, consumption, and disposal habits with regards to back yard composting, illegal backyard burning, special waste, waste reduction, reuse, recycling, and toxicity of waste. Waste Education shall emphasize waste reduction, recycling, and HHW as the preferred methods of reducing the quantity and toxicity of waste being landfilled.

It is anticipated that current waste education activities will be retained during the planning period. However, additional policies will be implemented and are discussed in this section. Waste Education will continue to be a priority for successful implementation of solid waste programs. County Staff will reach all sectors and levels of public awareness. Sectors will include residents, businesses, industries and institutions, civic and community organizations. County Staff the SW Regional Solid Waste Commission policy is to coordinate, create, develop, implement, and disseminate waste education on current issues and to update ongoing issues relating to solid waste along with continuing existing programs and opportunities with guidance through the use of a Communication Plan.

- 1) The SWRSWC and member Counties will develop a Communication Plan in 2014-2015.
 - a. The SWRSWC Communication Plan will be developed by the Solid Waste Administrators, with Lyon County serving as the lead (2014-2015).
 - The SWRSWC will have supervision and oversight of the Communication Plan.
 - The SWRSWC will delegate the duties and responsibility of development and maintenance to county staff that have the resources and talent in the delegated areas.
 - The Communications Plan will be monitored annually by the SWA's for needed updates and revisions throughout the planning period and reported to the SWRSWC
 - b. The Communication Plan will provide and enhance cooperation and a coordinated action and uniform solid waste management message, increase awareness and participation by all sectors, reduce duplication of effort, and will be seen as an on-going program.
 - c. The Communication Plan will cover all areas of solid waste materials and programs through all media methods describing both individual and regional efforts.
 - d. Development of a Communication Plan will standardize the education process, and address how to effectively and fiscally develop templates for outreach materials (reducing individual SWA office time in the development), address existing and future outreach methods, incorporate newer outreach (website presence, social media, and communication with non-English speaking population). Some examples include:
 - Media such as advertisements and public service announcements in the local newspapers and radio stations; and website presence.
 - Targeting and educating specific audiences such as youth as well as residents, government offices, and commercial establishments.
 - Outreach will include logical reasons and methods of managing separate fractions of the waste stream.
 - Development of educational templates for individual county information to be inserted.

- Working with groups and organization such as the Nobles County Integration Collaborative and Community Education will aid in reaching out to the non-English speaking population in the Region.
- g. Existing outreach will be documented, consolidated, and shared to reduce duplication of resources in creating new outreach materials.
 - h. The Communication Plan will meet at a minimum requirements in MS 115A.552, and also include requirements such as Newspaper Advertisements that are to run at a minimum of quarterly, recycling education, and waste reduction education.
 - i. The SWRSWC will provide financial support, at least initially on an as needed basis with 100 percent support and commitment through all member counties and their respective county boards. These financial resources may come from the funds of the Commission itself, or they may be requested from the member counties through agreed upon increase in dues paid in to the Commission (as was the case for the development of this Plan). This type of support shall involve specifically projects and efforts where efficiencies and economies of scale can be attained on a region wide basis having full consent and support of the whole commission, its members, and all their respective county boards.
 - j. Maintenance and updating the plan and documents as programs change will be an on-going task.
 - k. As a part of the Communication Plan, the SWRSWC and member Counties will create, develop, and maintain an official website specifically for the Commission.
 - Website development that can be utilized both internally (password protected) and externally (public access) will be researched and developed.
 - Internally, these could include: template education documents, draft SWRSWC meeting minutes, and other documents will be shared.
 - Externally, these could include educational materials, U-Tube videos (recycling, composting, HHW), reports, as well as draft meeting agendas and approved SWRSWC minutes may be posted.
 - On-going maintenance and updating the website and documents as programs change will be an on-going task.
- 2) The SWRSWC and member Counties will continue existing waste reduction education programs and consider new and innovative new educational efforts that provides motivation and opportunities for environmentally sound practices and initiate positive behaviors with respect to waste.
- a) The SWRSWC and member Counties will maintain or increase efforts for education outreach by and not limited to:
 - Prairie Ecology Bus⁵² and local Environmental Office staff (Redwood County, Yellow Medicine, Lac qui Parle).
 - The Counties will monitor new waste curriculums for incorporation in public schools. The material will be reviewed by the County Solid Waste Office staff for applicability. After approval, it will be introduced and reviewed with School District curriculum directors for applicability to existing curriculum, grade appropriateness and state graduation standards.

⁵² Lincoln, Lyon, Pipestone, Murray, Cottonwood, Jackson, Nobles, Rock, Renville counties. The Ecology Bus staff work with 3rd, 4th, and 5th grades and teach reduce, reuse and recycle to improve the environment.

- Assist groups, as they become known, such as FFA (Future Farmers of America), YES! Team (Youth Energy Summit), etc., with assistance in making connections with resources to enable the groups to engage in solid waste management activities..
 - Other outreach will include personal contact by solid waste staff and distribution of printed materials, presentations and exhibits promoting waste reduction at events in the region throughout the planning period.
- 3) The SWRSWC and member Counties, through their respective County staff, shall provide education through outreach and promotion at community events and to organizations, such as:
- a. Maintenance of a booth at county fairs, trade shows, local home and farm shows, community festivals, presentation upon request to organizations such as clubs, groups, and schools.
 - b. The County Solid Waste Administrators will continue to be available to answer questions and distribute a variety of waste education materials at events and on a request basis.
 - c. The SWRSWC and member Counties, through their respective Solid Waste Administrators, will work with commercial waste generators to reduce their waste by providing:
 - information on proper solid waste disposal education, recycling,
 - offering waste audits, and;
 - funding opportunities will be sought to provide a staff person to work with businesses.
- 4) The SWRSWC and Member Counties have established a number of waste education practices over the last several years and have/will continue to coordinate efforts with other organizations. Such as:
- a. State Agencies, coordinated efforts on Burn barrel reduction campaign, grants for rural garbage dumpsters, pop bottle recycling containers and grants, “Recycling away from home”, current and future use of “state contracts” for recycling and waste management services.
 - b. Regional agencies, such as Area Agency on Aging providing assistance with educating their clients and the public on better and more environmentally sound prescription drug disposal methods. Possible coordination with Missouri River Energy partners in buyback and disposal of older, less efficient appliances.
 - c. Other local public and private organizations, including but not limited to Cities, Soil and Water Conservation Districts (SWCD), Minnesota Extension, Community Corrections, School Districts, local clubs, etc. Coordinated efforts between the counties and local public and private organizations can consist of Environmental Fairs, Envirothon, sharing costs in education efforts, assistance in rural recycling maintenance, collection events, and may be expanded to other efforts.
- 5) The SWRSWC Counties will continue to promote proper handling of HHW and special wastes.
- a. Promote and organize special days for collection and handling hazardous waste and other Special waste.⁵³
 - b. These efforts are coordinated through Regional HHW programs.
- 6) The SWRSWC and member Counties will develop and implement a curriculum for staff and SWRSWC members to keep abreast of solid waste issues.

⁵³ Counties that hold at least one annual day collections are: Cottonwood, Jackson, Lac qui Parle, Lincoln, Murray, Nobles, Rock Redwood, Rock, Yellow Medicine

- a. Tours of solid waste facilities by the SWA's and SWRSWC have led to a better understanding of solid waste facilities and how they operate. This has served in the past to increase SWRSWC member and SWA's knowledge of the operations of existing facilities and how they may improve upon their own facilities.
 - b. To increase the knowledge of the SWRSWC, the SWRSWC will continue to sponsor and promote solid waste facility tours, invite to the SWRSWC meetings service provider presentations and MPCA presentation as merited for SWRSWC County Commissioners and solid waste staff.
- 7) The SWRSWC and member Counties have and will continue to provide on-site disposal education to rural (outside of incorporated communities) residents and industrial businesses on proper waste disposal and recycling opportunities.
- a. During the planning period, the SWRSWC and member Counties will seek grant assistance to direct additional education to the rural residents and businesses on the harmful effects of backyard burning of garbage and options to eliminate it. Funding will be sought to build on a previous effort⁵⁴ that engaged the public in the burn barrel campaign efforts to promote rural solid waste pickup services.
 - b. Dialog and education will be renewed with townships officials, and Agricultural Producer groups and community members to decrease burn barrel use and the harmful effects of emissions from burning.
 - c. The SWRSWC and member Counties will connect with and educate contractors who demolish structures regarding what they can do and what they cannot do; workshops in Redwood and Lincoln counties have been done and can be replicated in the member counties. There will be a concentrated contact of contractors in the years 2014-2016, and on-going contact thought the planning period, initially using the approach initiated by Lincoln and Pipestone Counties.⁵⁵
- 8) The SWRSWC Communication Plan as it is developed will include an educational component of the existing composting bin program.

Specific Individual Programs unique in individual counties, plan to maintain, expand, or continue to implement in next 10 years.

Cottonwood: Hands on learning by self-haul patrons at the landfill facility. Self-haulers will be educated on use of two dumping options; one dumpster will be for disposal of MSW at a fee and the second container available for recyclables at no fee. At the demolition landfill, containers for removal of recyclables from demolition materials will be available and patrons will be encouraged to use.

Jackson: Financially support and provide staff for the Prairie Ecology Bus Center earth days programs at Sparks Park in Lakefield.

Lac qui Parle: The county will continue to support the used shoe collections, four information radio programs per year, publish articles in local papers periodically, man a County fair booth, ad continue to implement the borrow bin program for events for the collection of plastic and aluminum beverage containers.

⁵⁴ The burn barrel education promotion focused effort in 2008 and resulted in less on-site disposal.

⁵⁵ Lincoln and Pipestone counties conducted meetings with their contractors.

Lincoln: Currently support and continue to support the Honor society, FFA's and classrooms in schools with resources to promote recycling.

Lyon: develop and distribute educational materials through various mediums such as ads, newspapers, websites, booths, presentations, and participation on committees such as Marshall GreenStep.

Murray: Annually maintain presence at the county fair with a booth.

Nobles: The County will continue to promote and develop educational and informational materials using print ads and articles, radio, and programs during awareness weeks. To promote county specific solid waste management information the county will provide a translation of solid waste information and development of permanent plastic phone book covers in four languages: English, Laotian, Spanish, and Vietnamese.

Pipestone: Newspaper and radio ads, Mailings sent directly to residents, Articles in Soil and Water Conservation District Newsletter.

Redwood: The County plans to continue provide education and outreach through various techniques, including Newspaper, radio, website, social media and special event programs promoting recycling and waste reduction. The County will continue to hold two collections each calendar year for appliances and two collections for e-waste. In addition, the county plans to continue to hold mobile HHW collections in some of the outlying towns located within the county to accommodate residents who have difficulty accessing the Redwood Falls HHW facility. The collections are moved around the county and include the collection of fluorescent bulbs. The county also advertises and conducts an annual collection event for the recycling of used pesticide containers. The Environmental Office staff will continue to educate rural residents about the availability and proper use of the township drop sites; and there will be continued efforts to reduce and recycle "special wastes" such as e-waste, carpet, mattresses, etc. The County will continue to promote or expand the Mobile Environmental Education Transport and update it with new products and information.

Renville: Initially the county program has directed towards urban residential families but as the program has expanded it now reaches all inhabitants of the county. The following are waste education elements of Renville County programs: County fair booth where waste education materials are distributed; Monthly advertising in all local newspapers and on the local radio station; Two direct mailings are done each year to all county residents and businesses; and the Solid Waste Officer and Household Hazardous Waste Coordinator will continue to meet with local groups.

Rock: Promotion of solid waste related activities through the Rock County Ag Newsletter to provide additional outreach to the agricultural producers, above and beyond what is accomplished through the local newspapers. The monthly newsletter is unique to Rock County, as USDA's Farm Service Agency and NRCS, and the Minnesota Extension Service no longer contribute monetarily towards its publication, but their articles, as well as County and SWCD articles and columns are published. Home and Garden/How To shows are staffed annually to distribute waste education and composting materials. Annually, a half page advertisement in the paper in the spring to outline/address the specifics of the County's recycling program. The County has found that there is a need to increase advertising in order to better educate/inform residents on what is acceptable in the recycling stream, as there are some challenges with what is being placed in the recycling bins.

Yellow Medicine: Education and outreach in the County will continue to be through the media (ads in the local newspapers, Radio ads aired throughout the month, sending columns to the local newspapers.

Published on a space-available basis. Included is contact information and the availability of free presentations for groups/organizations Information about solid waste posted on the county web site. Contact teachers (K- 8) in the county schools twice a year to let them know of presentations available to their classroom. Visit upon request to schools and other groups; maintain a booth at the county fair.

Estimated Program Budget, Responsible person, and Required Staff time (see appendix A for county and aggregated budgets and staff).

Included as part of the SCORE program budgets in Appendix A. Funding for Waste Education comes from: SCORE, Solid Waste Assessment, MPCA grant funding, GMLCF rebate, and landfill tip fees. There is an aggregated 2.33 FTE for the region of county responsible staff for the Solid Waste Education Program. The SWA and SWA staff account for the majority of the time; also identified are HHW staff, landfill staff, secretary / office manager, and county board. Others who could assist with waste education include Prairie Ecology Bus, Green Corp, City Staff and Lyon County.

Implementation Schedule

2014-2015 The SWRSWC and member counties will develop and implement a Communications Plan.

2015 The SWRSWC and member counties will sponsor training on the proper disposal of demolition debris

2015 The website will include information about open burning and on-site disposal hazards; and provide a list of alternatives.

2016-2022 – Implement, monitor and report Solid Waste Education activities to the SWRSWC on an annual basis.

V. c. Recycling**General Policy and Goals**

The goal of the SWRSWC and member counties is to prioritize recycling as the main method of reducing and abating the need for land disposal, to reach a minimum recycling rate of 42% by 2015⁵⁶ and 55% by 2022.

Policies the SWRSWC will implement to achieve this goal include:

- 1) The SWRSWC will annually review and compare local, regional, and statewide data to measure and evaluate the incremental progress of various initiatives towards meeting recycling goals and adjust county and regional work plans accordingly. Data sources could include SCORE data with projections from the GVT, local program data, surveys, pilot measures, local and state waste audits, county/regional recycling program costs. This annual evaluation will:
 - a. Identify counties falling below the SWRSWC projected recycling rate.
 - The Identified counties will institute additional recycling opportunities for the residents and businesses of those counties identified above. Those opportunities could include additional curbside recycling, additional recycling drop-off sites in the county, increased educational efforts employing the Communication Plan identified in the previous section of this plan.
 - Identified counties would use the 2013 Solid Waste Composition Study to identify what recyclables are being missed, determined who the generators of those materials are why those materials are not being recycled, and develop a specific direction in the guidance document to address those barriers through implementation of specific BMPs
 - The identified counties, with assistance from the SWRSWC, will institute specific initiatives from the SWRSWC guidance document that are targeted at correcting the barriers.
 - b. SWRSWC and all its member counties will annually evaluate existing recycling programs.
 - To identify missed opportunities for increased recycling such as curbside collection, rural opportunities, contracts, mandates, ordinances, organized collection.
 - To identify materials currently not being collected such as ag plastics, mattresses, source separated organics, and initiate and support programs for their collection as opportunities become available.
 - Develop an updated annual SWRSWC guidance document that lists out specific steps to achieve these priorities.
- 2) The SWRSWC and all its member counties will support and promote local markets for recyclable materials.
 - a) Promote and encourage development of private or public recycling markets in Southwest Minnesota in partnership with the state's market development program.
 - b) Market or contract with local or regional recyclers.
 - c) Increase procurement or purchase of recycled materials in county bids, projects and preferable purchasing of supplies.
- 3) The SWRWC and all of its member counties will increase commercial recycling.

⁵⁶ The 50% recycling goal for 2011 was based on 2007 data.

- a) Identify, develop initiatives, and provide technical assistance on Best Management Practices (BMP), to increase recycling.
 - b) This may be at Schools, businesses, multi-unit dwellings, industries, or other identified generators.
 - c) Measurement and tracking effectiveness may consist of using waste audits, program costs, container sizes, pickup frequencies and other metrics to measure progress.
 - d) Counties will share, research and work together to increase commercial recycling
 - The SWA's will work to identify new partners to aid in approaching the commercial sector and conducting waste audits, such as working with the chambers of commerce, MNTAP, or MN WasteWise, to connect with businesses.
 - The SWRSWC will utilize existing resources, such as the Recycle More Minnesota⁵⁷ campaign, a joint effort between the Recycling Association of Minnesota (RAM) and the Minnesota Pollution Control Agency (MPCA), designed to increase recycling in Minnesota through increased awareness about the benefits of recycling and the opportunities available.
- 4) The SWRSWC and Member Counties will maintain or work to increase the recycling programs.
- a) Residential Curbside Recycling. The SWRSWC and member counties will continue to implement residential curbside, which is available in the majority of the communities (and some denser populated rural areas) in the SWRSWC Region.⁵⁸ The Communications Plan will promote increased participation in the existing residential curbside recycling programs. Counties or cities contract with a private provider (or a city may be the hauler) to pick up recyclables and take them to a facility for processing. The public or private facility packages and markets the recyclables. Residential curbside recycling takes place in two ways: single sort and sorted.
 - *Single Sort.* Lincoln, Lyon, Rock, Nobles, Jackson, and Cottonwood Counties and of Fulda (Murray County) have residential single sort curbside programs⁵⁹. The Counties of Renville and Redwood will initiate single sort recycling sometime in 2015. By the 4th quarter of 2014, the Redwood-Renville Recycling Facility (in Redwood Falls) will be completed, single sort recycling will be initiated, and materials will be processed and marketed from the joint county facility. Once the change from sorted to single sort occurs, it is very difficult to change public behavior back to a sorted curbside recycling program. Locations with a single sort residential curbside program and anticipated to continue with a single sort program.
 - *Sorted.* Lac qui Parle, Yellow Medicine, Redwood, Renville, Murray and Pipestone Counties have sorted residential curbside recycling. Recyclables are separated by residents and placed in bins at curbsides. Lac qui Parle, Yellow Medicine, Pipestone and Murray County⁶⁰ intend to continue residential sorted curbside recycling programs. Murray and Pipestone Counties will continue to consider their options for single sort and sorted programs.
 - b. Rural Recycling. All counties will continue to offer drop off facilities (sheds or trailers) for residents without curbside recycling. Recycling sheds and trailers are defined by State rules as recycling centers; they accept multiple types of recyclables. The locations, types of materials, and hours of operation will be identified in the individual county data in this section. It is the

⁵⁷ <http://www.recyclemoreminnesota.org/>

⁵⁸ Cities and rural areas with curbside residential recycling are listed in Section IIe

⁵⁹ Nobles County began single sort recycling in 1994, the past five years, five other counties have implemented single sort recycling.

⁶⁰ Pipestone and Murray Counties entered into a five year recycling agreement (Appendix B).

intent to retain the drop off recycling facilities to provide for the opportunity to recycle. It is the intent of the SWRSWC Counties to continue to retain the drop off recycling facilities.

- c. Business - Commercial recycling - The SWRSWC and member counties will sponsor efforts that encourage commercial and industrial efforts to reduce, reuse, and recycle through the private sector the SWRSWC region.
- The City of Marshall GreenStep City Team has spearheaded an effort to recognize businesses that are voluntarily implementing waste reduction and recycling as part of their energy efficient business recognition program. The SWRSWC will support and encourage other communities to consider implementing the Minnesota GreenStep City program. There may be additional business recognition programs implemented that will encourage additional commercial sector waste management. Solid Waste staff will continue to conduct business place waste audits upon request.
 - During the annual review the SWRSWC and its member counties will examine mandatory recycling language in their ordinances. The Jackson County Ordinance has mandatory commercial recycling. They also collect a property tax fee for processing of the recyclables. The hauler collects no more than 15% of the MSW collection for the collection of recyclables. The county is researching a less cumbersome way of handling this program to be implemented in the near future.
 - Free Waste audits for the commercial sector will help identify increased recycling opportunities for businesses.
- d. Recycling at government facilities - The SWRSWC and member counties will sponsor and support through trained staff, waste reduction audits for cooperating communities and government facilities and promote the use of recycling for at least three of the primary materials. All heated County Government buildings maintain receptacles for a minimum of three materials to recycle: paper, metal (aluminum beverage containers), and plastic. The Communities in the counties also provide collection of a minimum of three materials. Some of the counties and cities have recycling containers at parks to encourage recycling. The County SWA's will bi-annually contact the communities in their respective counties to verify recycling of materials at municipal facilities. These activities will continue and expand as the opportunities present themselves.
- e. Recycling at Schools – The SWRSWC and member counties will continue to work with schools in the region to assure they are in compliance with Minnesota Statute, and the SWA's report annually to the SWRSWC^{61,62}. The SWRSWC will consider appointing an interested SWA

⁶¹ A 2012 survey conducted by MPCA (Appendix), School districts were questioned on their management of solid waste for the facilities under their control (Minnesota Statutes 115A.471), recycling of at least three recyclable materials (Minnesota Statutes 115A.151), and knowledge of their County Solid Waste Management Plan (Minnesota Statutes 115A.46, 5.b.). There was a 59% Statewide return rate (200 surveys); of which 19 school districts in the SWRSWC Planning area that responded. Survey results indicated 3 districts have 1-4 building where there is no recycling (Nobles, Pipestone, Rock counties) and 3 districts recycle less than 3 materials (Jackson, Murray and Redwood Counties), and ½ of the SWRSWC area school responses had never heard of a solid waste management plan. Based on survey data, the SWRSWC and member counties will conduct outreach and audits with the school districts to determine if recycling currently exists and make them aware of the statute and assist them in setting up, improve on collection programs and ensure they are collecting at least three materials.

⁶² The annual reports will be at the November SWRSWC meeting. It will include a review by the Solid Waste Administrators of achievements, and review of the SCORE totals as a progress report. The review will include recommendations by the Solid Waste Administrators on future options.

and/or Commissioner to participate in the MPCA's School Waste Prevention & Recycling Network.

- f. Voluntary vs mandatory - Nobles and Rock Counties and the cities of Windom, Bingham Lake, Mountain Lake, and Delft have mandatory recycling. Cottonwood, Lac qui Parle, Lincoln, Lyon, Murray⁶³, Pipestone, Redwood, Renville, are Yellow Medicine Counties have voluntary recycling and is encouraged through a recycling fee assessed to everyone. If the recycling rates needed cannot be achieved, SWRSWC counties will consider mandatory recycling during their annual November review of the comparison of the SCORE volumes and the GVT projections, and may be a tool to facilitate an increase in recycling rates. Jackson County has mandatory recycling for both the residential and commercial sectors. The SWRSWC could promote a mandatory recycling requirement in member counties to help achieve the recycling rate goal.
- g. Processing-
- Private processing centers:
 - 1) Waste Connections / Schaap Sanitation have a contract with Nobles County, the City of Fulda, and Heron Lake and the recyclables are taken to Worthington and marketed privately. In Cottonwood, Jackson⁶⁴, and Lincoln County, the recyclables are collected by Waste Management and Southwest Sanitation and they are hauled to Sioux Falls for processing. Lyon County has a contract with Southwest Sanitation who collects the recyclables.
 - 2) Rock County has a contract with Kettering to process the collected recyclables (City of Luverne, Town and Country, and Ketterling collect the recyclables in Rock County). Ketterling utilizes the day habilitation center clients (Rock County Opportunities) to assist in sorting the materials, and markets the materials.
 - 3) Renville County collection and processing of these materials is done by West Central Sanitation. The materials are sorted and processed at their facility. All the materials become property of West Central Sanitation and are marketed by them.
 - 4) Yellow Medicine County has individual contracts with both West Central Sanitation and Olson Sanitation to collect and process recyclables at their processing facilities in Granite Falls and Dawson, respectively. Materials are marketed privately
 - 5) Lac qui Parle County contracts with Olson Sanitation, Dawson, and recyclables are sorted at Dawson facility and marketed privately.
 - Public processing centers: Murray County operates a recycling facility in Slayton where the pre-sorted materials are brought from Murray and Pipestone Counties. Net profit from marketing the recycling is returned on a percentage basis to Murray and Pipestone Counties. Murray County contracts with Waste Connections / Schaap Sanitation and in Pipestone County the hauler is Van Dyke Sanitation; the hauler collects and transports the recyclables to the Murray County Recycling facility. The Redwood County Recycling Center in Redwood Falls accepts recyclables from residents and businesses in Redwood County. The contracted hauler is West Central Sanitation. The county also hauls some of the recyclables from the rural or township recycling sites via a county owned roll off

⁶³ The Murray County Ordinance requires if a city contracts with a hauler for MSW, they must also provide recycling service.

⁶⁴ Heron Lake has not yet been phased into the Jackson County contract with Waste Management; they currently have a contract with Schaap Sanitation. Heron Lake will phase in to the WM contract in 2014, and Jackson in 2015.

truck. Both the Redwood and the Murray County Recycling Centers bale and market their own recyclables. The counties continue to expand the list of “accepted” materials whenever possible, and have worked with many vendors to recycle unusual or non-typical items.

- h. Annual Recycling tonnages: The annual recycling tonnages collected, processed and marketed in the last five years by county and for the SWRSWC are identified in Tables 33 and 34. The recycling trend for the past five years for the SWRSWC area increased from 80,300 tons in 2007 to 82,000 tons in 2008 and trended down to 74,000 tons in 2012. Explanations for some of the variations include: in 2012, Farley - Sather’s closed and there was a 2000 ton drop in plastic recycling in Nobles County. Not only does it affect the County recycling numbers, but also the Regional totals. Other changes reflect staff changes at counties as well as the difficulty in obtaining some of the recycling tonnage data and results in numbers that can vary by year in sectors. Another factor that affects the volumes identified by Lac qui Parle County is that plastic is being used more for packaging instead of glass and aluminum. The new MPCA RETRAC program will assist in better identification of recycling volumes.
- i. Local market conditions –market prices fluctuate from month to month and year to year. Existing markets for recyclables apply primarily to Redwood and Murray Counties who market their recyclables to the best available markets. There is a local market for plastics in Worthington utilized by Redwood County. The remaining counties have contracts with private recycling companies who pick up and haul the recyclables where they are marketed by the firms who pick them up. All other materials go to either Sioux Falls or to the Minneapolis / St. Paul area. Some additional materials are processed in other areas of the state, but may be sent through brokerage firms located elsewhere. The SWRSWC and member counties are open to opportunities to promote and establish the local use of recycled materials.
- j. Residential Opportunity to Recycle. All SWRSWC Counties have and will continue to operate at least one recycling center that accepts four or more materials, open twelve or more hours per day as required by statute. In the majority of the counties, the opportunity to recycle for residents of apartments is conducted through the curbside residential programs or is fulfilled by provision of nearby recycling drop off location. There are no cities above 20,000 populations in the Region and there are three cities above 5,000 in population, Marshall, Worthington and Redwood Falls. Marshall has weekly curbside single sort recycling collection, Worthington has a bi-weekly single sort curbside collection and Redwood Falls has sorted recycling, picked up bi-weekly.⁶⁵

⁶⁵ The Redwood Falls recycling program will change to single sort at the sometime in 2015.

Table 33: Recycling by Sector 2008 - 2012

Sector	County	2008	2009	2010	2011	2012
Documented CII	Cottonwood	3,452.76	2,632.31	2,340.74	2,270.95	1.34
Documented CII	Jackson	2,755.99	2,489.33	2,702.23	3,011.91	3,177.65
Documented CII	Lac qui Parle	751.62	1,140.68	1,635.03	1,037.51	989.3
Documented CII	Lincoln	217.94	254.5	245	248	269.44
Documented CII	Lyon	10,309.61	15,142.95	11,891.40	14,633.90	13,825.84
Documented CII	Murray	347.77	907.31	803.48	549.38	858.91
Documented CII	Nobles	4,114.00	3,583.69	4,384.11	4,337.23	2,460.36
Documented CII	Pipestone	3,244.50	3,254.00	3,322.50	2,873.50	3,166.59
Documented CII	Redwood	2.93	12,563.90	2,276.75	1,379.89	2,403.36
Documented CII	Renville	617	344	353	497	563
Documented CII	Rock	630.8	1,180.89	1,109.95	832.26	867.67
Documented CII	Yellow Medicine	689.63	285.16	174.96	2,868.93	2,631.23
Documented CII	SWRSWC	27,134.55	43,778.72	31,239.15	34,540.46	31,214.69
Estimated CII	Cottonwood	NA	841	NA	900	1,030.18
Estimated CII	Jackson	376	300	300	NA	NA
Estimated CII	Lac qui Parle	7.9	NA	NA	NA	NA
Estimated CII	Lincoln	103	98.5	97.5	97.5	97
Estimated CII	Lyon	2,833.50	NA	NA	NA	NA
Estimated CII	Murray	974.67	434	392	415	427
Estimated CII	Nobles	5,610.00	5,441.00	5,441.00	5,523.00	5,412.00
Estimated CII	Pipestone	150	215	30	60	NA
Estimated CII	Redwood	17,181.00	4,690.40	15,190.82	12,302.32	9,788.06
Estimated CII	Renville	1,715.00	1,815.00	1,815.00	1,923.00	1,953.00
Estimated CII	Rock	391.56	NA	NA	342.4	419.75
Estimated CII	Yellow Medicine	300	NA	NA	NA	241.75
Estimated CII	SWRSWC	29642.63	13834.9	23266.32	21563.22	19368.74
Residential	Cottonwood	939.5	1,072.11	1,014.62	662.88	2,065.96
Residential	Jackson	1,014.10	1,214.54	1,210.08	869.2	986.85
Residential	Lac qui Parle	1,672.29	1,252.26	1,279.99	1,601.55	1,486.39
Residential	Lincoln	569.3	644.5	675.88	667.9	684.02
Residential	Lyon	2,504.57	2,912.60	3,238.32	3,114.18	2,285.46
Residential	Murray	942.01	955.13	1,127.07	1,162.06	1,207.08
Residential	Nobles	5,291.00	5,136.14	4,189.69	4,270.93	4,463.03
Residential	Pipestone	703.49	842.83	869.9	1,453.40	1,001.78
Residential	Redwood	5,191.63	5,573.19	5,044.80	4,929.44	4,829.48
Residential	Renville	1,900.00	1,954.00	2,065.00	1,653.00	1,624.00
Residential	Rock	1,610.96	1,365.42	1,428.89	1,432.06	1,338.09
Residential	Yellow Medicine	1,265.98	1,535.54	1,777.84	1,528.84	1,755.09
Residential	SWRSWC	23604.83	24458.26	23922.08	23345.44	23727.23
All Recycling	SWRSWC	80,382.01	82,071.88	78,427.55	79,449.12	74,310.66

Table 34: Annual recycling tonnages collected, processed and marketed by sector or program, for the last five (5) years.

Category	Year	Cot	Jac	LqP	Lin	Lyo	Mur	Nob	Pip	Red	Ren	Roc	YM	SWRSC
Banned	2008	255	247	194	158	432	151	1025	186	3141	542	687	166	7184
Banned	2009	348	189	175	160	415	135	960	248	3132	545	477	243	7027
Banned	2010	256	199	182	203	419	140	399	285	2855	515	487	339	6277
Banned	2011	283	205	227	194	460	146	405	295	2660	590	439	176	6077
Banned	2012	230	254	238	180	481	143	461	208	2413	535	471	365	5979
Glass	2008	95	115	38	69	262	136	205	147	307	392	82	221	2068
Glass	2009	102	113	64	83	340	171	212	134	323	507	109	241	2398
Glass	2010	102	98	72	80	400	160	214	178	291	548	112	193	2447
Glass	2011	112	77	62	81	367	165	227	187	284	522	106	208	2397
Glass	2012	108	81	56	86	303	176	332	183	295	523	116	213	2472
Metal	2008	56	738	763	89	5210	470	4451	141	3812	761	485	358	17334
Metal	2009	78	645	1021	98	5524	424	4328	174	3784	608	587	144	17414
Metal	2010	123	593	829	102	4783	430	4327	185	3149	661	621	84	15886
Metal	2011	473	825	673	92	7011	431	4419	235	2116	696	720	2831	20522
Metal	2012	362	1121	192	87	7354	424	4141	41	2016	673	722	2756	19889
Organic	2008	NA	31	648	8	NA	5	143	NA	2750	890	NA	NA	4475
Organic	2009	22	24	15	8	138	39	143	82	2434	890	NA	NA	3796
Organic	2010	23	21	591	8	42	26	207	97	2430	890	NA	NA	4333
Organic	2011	NA	27	270	8	114	34	231	102	1800	971	NA	NA	3555
Organic	2012	NA	28	498	7	30	29	173	104	1862	971	NA	NA	3702

Table 34 continued

Category	Year	Cot	Jac	LqP	Lin	Lyo	Mur	Nob	Pip	Red	Ren	Roc	YM	SWRSC
Other	2008	2402	1170	1	NA	4858	133	1914	1640	6900	44	498	678	20238
Other	2009	2400	1183	74	NA	3586	113	1914	1655	7041	NA	448	140	18553
Other	2010	1200	1523	137	NA	2971	101	1914	1668	7041	NA	428	136	17119
Other	2011	900	1151	126	NA	2883	114	1924	1662	6174	10	342	137	15423
Other	2012	600	1150	210	NA 2	2501	112	1949	2002	5214	10	308	137	14194
Paper	2008	1532	1728	711	495	3983	1097	5596	1487	4009	1468	817	762	23683
Paper	2009	1536	1735	957	560	6941	1188	4917	1453	4312	1429	837	882	26747
Paper	2010	1590	1712	1005	535	5432	1262	5194	1198	4849	1474	796	1043	26090
Paper	2011	2004	1536	1165	546	5822	1029	5112	1296	3643	1196	901	885	25135
Paper	2012	1774	1476	1187	592	5249	1398	4321	1234	3446	1312	892	982	23863
Plastic	2008	53	42	57	13	134	120	1347	347	427	90	65	38	2732
Plastic	2009	59	38	54	22	197	98	1352	351	552	89	43	54	2910
Plastic	2010	61	33	68	22	201	74	1395	346	559	100	56	53	2969
Plastic	2011	62	36	72	21	219	63	1432	326	578	43	56	56	2965
Plastic	2012	23	38	55	23	193	62	479	380	530	51	64	70	1970
Textiles	2008	NA	76	20	58	769	153	334	150	1030	45	NA	33	2667
Textiles	2009	NA	78	34	66	915	129	334	215	1250	45	45	116	3226
Textiles	2010	NA	34	31	70	883	130	366	266	1338	45	39	105	3306
Textiles	2011	NA	24	45	72	874	145	381	284	1357	45	42	105	3375
Textiles	2012	NA	17	40	74	NA	148	480	16	1245	65	52	105	2241

The SWRSWC will encourage member counties to provide convenient and affordable recycling opportunities to multifamily housing units, beginning in 2015. The opportunities to recycle for multifamily units is mixed throughout the region, in some communities curbside is available, in others, multifamily units are provided the opportunity to recycle by bringing their recyclables to a recycling center / shed / recycling trailer located in or near the communities. The SWRSWC will review existing studies such as the West Lake Superior Sanitary District study on improving multi-family housing recycling.

Rural residents also have a mixture of opportunities to recycle in the region, ranging from curbside pickup to drop locations (recycling center, recycling shed or recycling trailer in a nearby community).

Residential curbside recycling is paid by the county programs in all but two counties (Rock and Murray) where municipal residents pay additional fees for curbside collection.

- k. Waste Pesticide Container Collection Program - All twelve counties annually participate in the Department of Agriculture Waste pesticide container collection program and intend to continue to participate. Ten Counties collect and send their triple rinsed pesticide containers to Murray County who bales and markets them. Renville County and Redwood County collect waste pesticide containers and are recycled by Redwood County. In Lac qui Parle County, the Minnesota Department of Agriculture furnishes bags to local fertilizer dealers & elevators who collect the containers from the farmers. In August the bags are taken to two locations in the County. One in Dawson, one in Madison and a company the Department of Agriculture hires schedules the pickup of the bags.

Specific Programs to be maintained, expanded, implemented over next 10 years.

Overall, the SWRSWC will strive to work toward a unified approach for recycling that is effective and efficient, recognizing that a unified approach does not necessarily mean the same program in each county. Measurement for all the recycling initiatives will be through comparison of the SCORE data collected by MPCA and comparison of the GVT projections and review of programs implemented. There may be other measures identified to be implemented during the ten year planning frame, currently unknown – or unable to identify. The measures and comparisons will be reviewed annually by the Solid Waste Administrators, and presented to the SWRSWC with recommendations of how to make improvements if needed.

- 1) Curbside recycling is successful and the counties will continue to implement. In order to increase recycling rates, several approaches (single sort, source separated, public and private operations, targeted rural population clusters – such as lake sub-divisions for curbside recycling) will need to be considered and implemented within the next 10 years, recognizing that some activities that work in one county may not be successful in another. The SWRSWC will review the SCORE volumes and compare the Regional goals to determine what additional efforts are needed to implement. The SWRSWC will also periodically review recycling BMPs from other counties for applicability and incorporate appropriate options into their Communication Plan.
- 2) Enhance existing rural residential recycling. Consider expansion of the rural 24/7 recycling programs to include organized or site collection of MSW at the same location (similar to Redwood and Lincoln

Counties). The difficult part of this program is the cost of the recycling containers and the cost to service these containers, some of which are on opposite ends of the county, and past experience with rural MSW collection. The SWRSWC will assign a sub-committee of SWA's and Commissioners to research the elements of the success of programs and why some programs failed and were discontinued by the year 2018. The purpose is to be able to replicate programs that work well and avoid replication of problems that resulted in the discontinuation of a program. County wide recycling

- 3) A task force will be assigned by the SWRSWC by the year 2016 to work on ways to enable cooperation between small communities and the townships they neighbor. If small communities can work together to implement programs such as an expanded rural recycling / MSW sites, costs for disposal can be shared and in some cases, the expense of curbside recycling eliminated in the areas with less than a 20% recycling collection ratio.
- 4) During 2015-2016, the SWRSWC will initiate education on the proper preparation of cardboard for recycling. Identify what the financial impacts (costs) are for proper vs improper preparation of cardboard. Educate county and community leaders on those financial impacts. Initiate a regional campaign why it is important for residents to prepare cardboard for recycling.
- 5) Farm plastic recycling. SWA's will monitor RAM and MPCA efforts and continue to explore the end markets for hard to recycle commodities such as used "super sacks" (woven polypropylene plastic bulk seed bags) drain tile, silage bags and other agricultural plastics, which is a consistent initiative identified by the SWRSWC. This initiative will be on-going over the ten year plan and implementation will be dependent upon market opportunities. SWA's will develop a cooperative collection of these materials if and when markets are available and is economical feasible.
- 6) The SWRSWC and member counties will research the assessment processes to collect solid waste fees from both residential and commercial properties. This will be initiated by the SWRSWC in 2014-2015.
- 7) Commercial sector audits program. Currently this is conducted on a request basis. Primarily due to limited County staff time and responsibilities. The SWA's will continue to monitor resources that can assist in training volunteers who will be able to assist in conducting business audits, thus extending education and implementation outreach to reduce and recycle before disposal. The SWRSWC will investigate and consider developing recycling programs such as a Master Recyclers program that is implemented elsewhere.
- 8) The SWRSWC and member counties will promote and enhance new approaches to encouraging Commercial sector recycling throughout the planning period.
- 9) The SWRSWC will research Glass in the recycling stream and it uses that could be applied to recycling. They will initiate effective glass recycling efforts and affect MPCA policy to expand the reuse of glass as recycling.
- 10) Multiunit household recycling. There is successful multiunit recycling occurring within the SWRSWC area. The SWRSWC will review existing multi-unit recycling and develop, initiate, and promote

recycling strategies for recycling at multi-units complexes by the years 2017- 18. The results will be shared with the SWRSWC for possible replication of successful programs as needed.

- 11) Consistent reporting of recycling by counties. Throughout the development of the Regional Solid Waste Management Plan, including the review of past SCORE report information, and comparing the dates to when there have been staff changes and other indicators, there appears to be some inconsistency in what is counted for recycling in the SCORE report and what is not counted. The SWRSWC County SWA's will annually meet to discuss how and what they use to count in the SCORE reports, with the objective of reporting more consistent data. Part of this process will be to identify innovative ways to work with private industry to document recycling.
- 12) Ban recyclables from waste (Ordinance). The SWRSWC will review the County solid Waste Ordinances for the purpose of banning recyclable materials from the MSW stream.
- 13) Regional collection of items is often a more cost effect way of managing waste and can have the added benefits of removing MSW (for recycling or reuse). Examples of this can include (but is not limited to asphalt shingles, mattresses, tires, and farm plastics. The SWRSDWC will initiate review for implementation of regional collection as opportunities present themselves throughout the planning period.
- 14) Sub-regional collection of items. The Redwood Renville Regional Joint Powers Recycling Center will be operational during 2015 (estimated February). The drop sites in Redwood and Renville have had a good response from rural residents that want to participate in recycling without driving too far to drop off their recyclables.
- 15) Understanding of adjacent county recycling programs can be implemented during the annual update meeting (November) to the SWRSWC on how the county recycling programs operate. This report will not only provide the information to SWRSWC members (who change from time to time), but to also monitor the effectiveness of implementing waste reduction, education, recycling, and other MSW programs.
- 16) Mattress Recycling Work to establish an end user or market for difficult materials such as carpet, mattresses, Styrofoam, etc. The SWRSWC will initiate review for implementation of regional collection as opportunities present themselves throughout the planning period.
- 17) The SWRSWC will promote the area as a recycling business friendly thereby helping create a local recycling market. By functioning as a "region" to attract businesses that utilize recycled feedstock as a component of their raw material, local markets for the commodities will be available for materials generated. Bedford Technology Lumber is a perfect example. If the region could attract an e-waste processor, an agricultural plastics manufacturer or similar company, long term local markets for recyclables would be guaranteed and would generate more revenue for the region.

Recycling Centers

Cottonwood County - There are 10 drop off sites available 24/7 in the county: Westbrook, Storden, Jeffers, Germantown Township, Delft, Diamond Park (City of comfrey), Mountain Lake, Bingham lake, City of Windom, Landfill, and Talcot Lake Park. The landfill also has a recycling drop off site and is open

the same hours as the landfill. The Recycling haulers are Waste Management and Hometown Sanitation. Materials Accepted: Magazines, Office paper, brown paper bags, newspapers, paperboard, junk mail, phone books, paper cardboard, dairy and juice containers, aluminum cans, tin or steel cans, glass bottles and jars, Plastic bottles and containers (1, 2, 3, 4, 5, 6, & 7). The county has not implemented a business recycling program, however businesses can recycle with haulers on a contract basis. Until December 2011, Cottonwood County collected sorted recyclables on a bi-weekly basis with county vehicles and employees. In January, 2012, in pursuit of the 50% recycling goal, the county entered into a three year contract with Waste Management to do single sort curbside collection pickup every other week. The recycling department is funded through a recycling fee added to the property taxes and with SCORE funds.

Jackson County - Recycling Centers: All of the Cities in Jackson County are provided with a curbside residential collection on a weekly or bi-weekly basis; and there are 11 drop off sites throughout the county available 24/7: Jackson County Highway Shop, Bergen, Delafield Township grader shed, Weimer Township grader shed, Community Point County Park, Robertson County Park, Hurley Campground, Sioux Valley School, Okabena, 4 mile corner and Petersburg Town Hall. Recycling haulers are Waste Management, Waste Connections (Schaaps) in Heron Lake until January 2014; at which time the entire county will be collected by Waste Management. Materials Accepted are Glass, Plastic (1,2,3,4,5,6 and 7), paper, cardboard, metal, steel and aluminum. The County collects a “processing fee” that is then forwarded to the recycling collectors and each business is responsible for negotiating its own contracts. Governmental Recycling (include schools here too) (co offices / facilities need to be recycling 3+ materials). The county offices all are involved in recycling and are very proficient at reducing, reusing and recycling. Financing: Each resident is charged a recycling assessment on their tax statement along with SCORE funds. If funding runs short some general funds may also be utilized.

Lac qui Parle County - Recycling Centers: There are four drop off sites in the county open 24/7. Residential curbside recycling pickup is in the seven communities, weekly by Olson Sanitation, Inc. Materials Accepted: Glass, aluminum, tin (steel), cardboard, paper, plastics #'s 1, 2, 3, 4, 5, & 7. The recycling hauler picks up recyclables from non-residential clients when requested by the business or organization. Recycling occurs in all governmental facilities in the County. All schools in the county have extensive recycling programs within the school system. Financing: County SCORE grant and Solid Waste Assessment. The hauler is paid monthly upon receipt of detailed report of tonnages of recyclable material picked up and where they are marketed.

Lincoln County - Recycling Centers: There are nine unmanned recycling shed sites open 24/7, each either single or pairs of drop-off sites located throughout Lincoln County. Where recycling sheds are paired, one shed is designated for paper and one shed is designated for all other recyclables. The County also offers MSW disposal at each of the recycling shed locations. The locations include: Lake Benton, Ivanhoe, Hendricks, and Tyler with pairs of drop off sheds; and Arco, Verdi (unincorp), Wilno (unincorp), Marble Store – in Marble Twp., and Lake Shakotan on the north side at boat landing with single drop off sheds. Materials accepted are paper (newsprint, cardboard, paper), glass, plastic, tin (steel) and aluminum cans. The public residential recycling system includes curbside collection in each incorporated municipality and is collected twice per month by Southwest Sanitation who is under a flat fee contract with the county to pick up residential recycling and the drop off shed *Commercial and Intuitional*

Recycling is conducted on a contract basis with their waste hauler. County programs do not pay for commercial or institutional recycling. Specific commercial recycling activities vary from establishment to establishment. The most significant commercial recyclable collected is corrugated cardboard. However, other materials are collected as well. *Governmental Recycling* occurs at all local government facilities in Lincoln County. The County Courthouse and the Minnesota Extension offices source separate plastic, paper, glass and metal cans. However, office paper is the dominant recyclable material collected. The County Highway Shop recycles scrap metal as well. The Lincoln County Parks system also has recycling receptacles to collect plastic and aluminum beverage containers and glass. The County will continue to conduct waste reviews to determine potential areas where recycling can be increased and improved over time. Schools and Municipal governments also participate in recycling. All schools recycle at least three broad classes of materials⁶⁶. Financing of the Recycling Program. The program is financed through the County SCORE grant and County match from the general levy.

Lyon County - There are 15 drop off sites available to rural residents: Amiret, Balaton, Cottonwood, Florence, Garvin, Ghent, Green Valley, Lynd, Marshall (three sites), Minneota, Russell, Taunton, and Tracy. In the communities of Marshall, Cottonwood, Minneota and Tracy, recyclables are collected in 30 cubic yard roll-off containers. All other locations use sheds. The drop off sites are open 24/7. The recycling hauler is Southwest Sanitation. Materials accepted are glass containers, aluminum, and steel cans, OCC, newsprint, office paper, magazines, plastic containers 1,2,3,5 and 7. The County currently promotes C & I recycling, however, the area solid waste haulers (Olson Sanitation, Southwest Sanitation and Waste Management) provide this service under direct contracts with individual business. Lyon County Government offices have recycling containers. Materials collected include paper/cardboard, aluminum cans, tin cans, plastic bottles/jugs/tubs & glass bottles and jars. Lyon County Schools – including kitchens– recycle paper/cardboard, plastic bottles/containers, aluminum cans, metal cans, glass bottles and jars. Financing is through SCORE, service fee and rebate from landfill GMLCF

Murray County - There are 11 recycling sheds open 24/7 located in the cities of Avoca, Hadley, Currie, Fulda, Lake Wilson, Dovray, Iona, Slayton, Current Lake and Marshes Landing; and the recycling facility is in Slayton open 8 – 4:30 Monday through Friday. The recycling hauler for the county is Waste Connections / Schaap Sanitation. In communities, whoever the community contracts to haul MSW must also be the recycling hauler. Materials accepted are Paper, magazines, cardboard, plastics #1, 2, 4, 5, glass, tin and aluminum cans. Commercial and Institutional Recycling: The hospital and nursing homes recycle ; bars either haul direct or use a hauler to pick up recyclables (mainly glass); Monogram meats and Page 1 Printers haul their recyclables directly to market. All governmental offices recycle in Murray County, paper products are the largest volume generated from these facilities, but other products are collected (metal beverage containers, glass, and plastic). The sheds are financed through SCORE and the recycling facility is financed through a tipping fee to Pipestone and Murray County. Proceeds from the sale of commodities are distributed to the participating counties.

⁶⁶ Some schools are not recycling glass, because of the low volume generated, as institutional food service products largely are marketed in plastic or metal containers.

Nobles County - Recycling Centers: Many of the residents of Nobles County who self-haul to the landfill (approximately 5%) utilize rural recycling drop-off sites, as do some of the approximate 10% of the residents who dispose of refuse on-site. There are eleven drop-off sites located throughout Nobles County and one Recycling Center. They include: Nobles County Highway Shop, Adrian; Brewster City Shed, Brewster; Dundee City Shed, Dundee; Ellsworth City Shed, Ellsworth; Leota Christian School, Leota; Reading Community Center, Reading; Round Lake City Shed, Round Lake; City Water Tower, Wilmont; Ace Hardware, Worthington; Nobles County Recycling Center, Worthington; Seward Township Hall, Fulda. The sheds are open 24/7 as is the drop off outside the recycling center. The Recycling Center is located on Highway 60, south of Worthington. Nobles County has a co-mingled recycling program and accepts glass, paper, metals, and plastics. The residential curbside recyclables and some businesses recyclables are collected commingled in a standard packer truck. The packer truck dumps the recyclables onto the floor of the Recycling Center where the recyclables are screened for consolidated materials such as bundles of newspaper. Those bundles are separated and put into a single source pile and they are processed and marketed from the Recycling Center. The mixed recyclables are left, loaded into a semi-trailer with a skid loader. After the semi-trailer is full, it is shipped to Millennium Recycling in Sioux Falls, SD. At Millennium Recycling, the recyclables are placed into an automated sorter system. Millennium reports tonnages of individual materials back to Schaap for record keeping. This new collecting system has resulted in substantial savings for both the county and hauler.

Schaap Sanitation collects from the recycling sheds and provides curbside recycling service to the communities of Adrian, Brewster, Dundee, Ellsworth, Leota, Reading, Round Lake, Wilmont, Lismore, St. Killian, and Worthington. Rural curbside recycling service is being used by 15 percent of Nobles County residents. Nobles County has business recycling, rural recycling, and curbside recycling programs. Nobles County also has a very successful business-recycling program with nearly 900 businesses recycling. No discrimination is made between residential, commercial, or rural recyclables for the paying of the subsidy.

Detailed monthly reports are required to be submitted by the recycler, on forms provided by the county, reporting the types and quantities of materials collected from each city and the rural drop site, along with the eventual destination and price paid for the collected materials. The amount of materials collected for recycling has increased since the county program began. Currently that market price for recyclable material is very low. Nobles County will continue to collect recyclable material in hopes that the market will rebound in a short period of time. Nobles County has arrangements for the collection and processing of recyclables with Schaap Recycling are expected to continue. Five-year contracts, which are examined annually, will continue. The categories and types of material collected and the amount of subsidy will continue to be evaluated annually. The recyclable material currently being accepted includes, glass (clear, brown, green), plastics 1-7, newspaper, corrugated boxes, office paper, Bi-metal tin containers, books and magazines. It is expected that as markets develop and grow for different materials, new materials, such as industrial shrink-wrap, vinyl siding, silage wrap, and aerosol cans will be added. Collection of all curbside recyclable material occurs weekly throughout the county and cities. Staff will continue existing program efforts and work to increase the percent of commercial and residential entities that recycle.

Work with Schaap Sanitation and area businesses in developing a Recycling Bank for residents of Nobles County. RecycleBank is a loyalty and rewards program that motivates households to recycle. It is a totally recharged and reinvented way to recycle. This RecycleBank will in-turn decrease our solid waste generation going into the landfill.

Novak Sanitary Service located in Sioux Falls currently is providing this incentive. In their program every household will receive a large 95-gallon wheeled recycling cart equipped with an RFID (radio frequency identification) tag. This RFID tag has a unique number and will associate the cart to the households address. The household will not have to sort the recyclable material when placing it in the recycling cart. The trucks have been retrofitted to read the RFID tag, weigh the recyclables and transmit this information to the households personal RecycleBank.com Account, where they earn RecycleBank Points. For every pound of recycling collected, 2.5 Recycle Bank Points are credited 450 points per month maximum or 5,400 points per year.

It's important to know that an average recycler with Recycle Bank has the ability to earn and redeem hundreds of dollars' worth of rewards and discounts at local and national businesses each year. Currently, Recycle Bank has more than 400 local and national reward partners dedicated to its mission to encourage communities and households to recycle. Nobles County will monitor this program along with Schaap Sanitation to see if it would be a viable option within the County. If this initiative by the private sector is found to be viable in Nobles County, it will serve as a pilot and the SWRSWC will look at the impact and potentially recommend implementation in member counties.

Pipestone County - There are nine recycling drop off locations available to rural residents 24/7: Pipestone, Ihlen, Jasper, Troksy, Edgerton, Hatfield, Woodstock, Holland and Ruthton. Sheds are used for collection of materials in all cites except for Pipestone, which utilized three roll off containers, two for cardboard and one for all other materials. Van Dyke Sanitation has is contracted to collect and dispose materials for processing at the Tri-County recycling facility located in Slayton. Materials accepted include paper/cardboard, plastic (1 – 5), tin/aluminum, and glass. Pipestone County promotes C & I recycling also, however local commercial haulers provide these services under direct contract. Commercial haulers include; City of Pipestone, Van Dyke Sanitation, Waste Management, and Waste Connections. Pipestone County Government centers also promote recycling and have recycling containers located in most all buildings. Pipestone County Schools recycle paper, cardboard, plastics (1 – 5), tin/aluminum, and glass, commercial haulers provide these services under direct contract. Financing is provided through SCORE, solid waste assessment, and rebate from landfill GMLCF.

Redwood County - There are 4 township sites that have a 30 yard roll off recycling container, one or two 6 yard dumpsters for cardboard, and dumpsters of various sizes for MSW. There are 2 township sites that have various size dumpsters for MSW and NO RECYCLING. There are 7 township sites that have a 30 yard roll off recycling container, one or two 6 yard dumpsters for cardboard, and NO MSW collection. The county also operates 4 recycling sheds located in area communities and the drop off area at the main facility, for a total of 18 locations where residents can drop off recyclables open 24 /7. The Recycling Center is located in Redwood Falls and is open Monday thru Friday from 8:00am to 4:30pm. The recycling haulers are West Central Sanitation and Redwood County. Materials accepted are Corrugated Cardboard, Newspaper, Magazines, Office Paper, Phone Books, Paperback Books,

Paperboard (no wet strength); Plastic numbers 1 thru 5, plastic bags; Clear, Green and Brown Glass; aerosol cans, steel cans, and aluminum cans. SCORE funds, revenue from the sale of materials, and a portion of the Solid Waste Surcharge that is charged on each tax parcel to finance the recycling program. Commercial recycling is available to any business that requests the service. Collection costs vary depending on the size of the containers used and the frequency of collection. The businesses remit a fee directly to the hauler for collection services. If businesses choose to bring the materials to the facility, there is no charge to recycle these items. Processing costs for the material collected from these commercial accounts is covered either by the revenue generated from the sale of the recyclables or a portion of the solid waste surcharge. All of the schools in Redwood County have the ability to recycle at least four, if not five commodities including plastic, paper, steel food cans, cardboard and aluminum. County offices are consistently recycling high grade paper, newsprint, cardboard, plastic, and in some cases, aluminum cans. In many of the county buildings, the maintenance staff collects and delivers the recyclable materials to the recycling center. The highway department recycles all of the commodities mentioned above, plus used motor oil and used oil filters.

Renville County – There are recycling centers located in each of the communities and at the County landfill. The community drop off sites are open 24/7, and the landfill site is open from 8 am to 4 pm Monday through Friday and the first and second Saturday of each month 8 am to 11 am. The recycling centers are drop off locations with 8 yard dumpsters and are available to all residents and businesses. There is a semimonthly curbside pick-up available to community residents through a contract with West Central Sanitation who also offers to pick up recyclables from businesses. The drop sites are available to all residents and businesses.

Governmental Recycling: The existing programs will be continued at least at the current level of collecting 3 or more materials. Two direct mailings per year and monthly notices in the newspapers giving recycling times and places are planned. The County will continue to review its solid waste ordinance. Although recycling is not mandatory at this time, the SWRSWC's goal of 50% recycling may result in the need for mandatory recycling in the future. Increased recycling rates would reduce the need of landfill space.

Materials accepted in Renville County are Paper, cardboard, paperboard; metal; all plastic containers and lids (not film/bags); and glass. The program is financed through SCORE and the County Environmental Assessment.

Rock County - Ketterling Services, Inc. operates a recycling center (Tuesday – Friday from 8-12 and 1-5, Saturdays from 9-12); and there are Recycling Drop Off Locations available 24/7 in Hills, Steen, Kanaranzi, Magnolia, Kenneth, Hardwick, and Beaver Creek. The recycling haulers in Rock County are Ketterling, T & C, City of Luverne, Scott's Dumpsters, and LLC. There is curbside pickup in Luverne, Hills, Steen, Beaver Creek, and Hardwick; Magnolia and Kenneth utilize the drop off sites within their communities. Materials accepted are Plastics #1-#7, Glass jars and bottles (all colors), Corrugated Cardboard and Paperboard, Newspapers, mixed paper including junk mail, phone books, inserts, magazines, office paper, Tin cans, Aluminum Cans are accepted for recycling. Commercial haulers licensed in Rock County for hauling recyclables provide pickup services to commercial and institutional customers. Some commercial businesses collect and market some of their own recyclables, which include such businesses as Shopko Hometown, Blue Chip, and Continental Western Group.

Governmental Recycling: The existing programs will be continued at least at the current level. Annual advertising notices, as well as periodic notices in the newspapers giving recycling times and places are planned. The County will continue to review its solid waste ordinance. Recycling is mandatory at this time.

The SWRSWC goal of 50% recycling may result in the need for increased educational and promotional efforts. Commercial waste audits identified in this section will not only help businesses identify waste reduction, potentially reduce landfilling, and increase recycling opportunities.

Financing: Solid Waste Assessment, SCORE Grants

Yellow Medicine County - Yellow Medicine County has a total of 7 drops sites throughout the county that collect recyclables in 30 cubic yard roll-off containers. Locations include the communities of Canby, Clarkfield, Echo, Granite Falls, Porter, St. Leo, and Wood Lake and are open 24/7. Yellow Medicine contracts for bi-weekly curbside recyclable collection in every community in the county. The two waste haulers, Olson Sanitation and West Central Sanitation, provide both residential and commercial recycling in the communities where they provide garbage service. One exception to this is in the community of Granite Falls. West Central is responsible for all curbside collection for residents. Container Glass, Al and tin cans, OCC, MAG, ONP and office paper, Plastic containers-1,2,3,5,and 7 are accepted for recycling.

Both Olson Sanitation and West Central Sanitation are under contract with Yellow Medicine County to provide collection, and process services. Government offices in Yellow Medicine County have receptacles for employees to recycle paper/cardboard, plastic bottles/containers, aluminum cans, metal cans, glass bottles & jars. Yellow Medicine County Schools - including kitchens -are recycling paper/cardboard, plastic bottles/containers, aluminum cans, tin cans, glass bottles & jars. Financing: SCORE, Solid Waste Service fee, and rebate from the Lyon County Landfill GMLCF.

Estimated Program Budget, Responsible person, and Required Staff time (see appendix A for county and aggregated budgets and staff).

Funding sources for this program are: SCORE, solid waste Assessment, GMLCF Rebate, landfill tip fees, and charges to other counties. The aggregated FTE for county Responsible positions is 8.47, with the SWA and SWA staff accounting for the majority of the time. Other County responsible positions include HHW staff, landfill staff, secretary / office manager, and county board. Non county positions include: PEBC, contracted recycler, MSW Hauler, City Staff, and the Tri county Recycling Program.

Implementation Schedule

November 2015 and annually thereafter the SWRSWC will review the SCORE volumes and compare the Regional goals to determine what additional efforts are needed to implement.

On-going SWRSWC member counties will continue to implement curbside recycling.

2015-2018	Enhance existing rural residential recycling. SWRSWC will research elements of successful and unsuccessful programs with the intent to identify replicable programs for county wide recycling.
2014 on-going	Commercial sector audits program will be implemented to assist businesses with reduce, reuse and recycle.
2015-2016	SWRSWC will initiate education on the proper preparation of cardboard for recycling.
Ongoing	SWRSWC will continue to explore the end markets for hard to recycle / reuse commodities as well as common materials, such as glass.
2014-2015	SWRSWC and member counties will research the assessment processes to collect solid waste fees from both residential and commercial properties.
On-going	The SWRSWC and member counties will promote and enhance new approaches to encouraging Commercial sector recycling throughout the planning period.
2017-2018	The SWRSWC will review existing multi-unit recycling and develop, initiate, and promote recycling strategies at multi-units complexes.
2016-2017	The SWRSWC will initiate its review of County Solid Waste Ordinances for the purpose of banning recyclable materials from the MSW stream.
On-going	The SWRSWC will initiate review for implementation of regional collection as opportunities present themselves throughout the planning period.
2016	The SWRSWC will assign a task to work on ways to enable cooperation between small communities and the townships that they neighbor.
On-going	the SWA's will continue to explore the end markets for hard to recycle commodities.
Annually	The SWRSWC County SWA's will meet to discuss how and what they use to document in the SCORE reports, with the objective of reporting more consistent data. Part of this process will be to identify innovative ways to work with private industry to document recycling.
2015	The Redwood Renville Regional Joint Powers Recycling Center will be operational during 2015 (est. February) Expansion of the drop sites in Redwood and Renville for rural residents to recycle.
On-going	The SWRSWC will promote the area as a recycling business friendly thereby helping create a local recycling market.
On-going	The SWRSWC will continue to promote behavior change to "Recycle....Not Refuse"

V. d. Yard Waste**General Policy and Goals**

It is the goal of the SWRSWC and its member counties to assure yard waste does not enter any MSW, resource recovery, or demolition landfill except for the purpose of reuse, composting or co-composting.

- 1) The SWRSWC member counties will continue to prohibit by ordinance the disposal of yard waste in any MSW or demolition landfill, and resource recovery facilities as applicable.
- 2) The SWRSWC and its member counties will educate residents on options composting of and proper disposal of yard waste.
- 3) SWRSWC and its member counties will explore barriers and coordinate enforcement of yard waste restrictions. Landfill operators trained and instructed in identifying illegal disposal of yard waste in the MSW and C&D waste stream.

In 1992, all member counties of the SWRSWC banned yard waste from MSW, demolition, and resource recovery facilities.

Yard waste programs that include yard waste and brush, the majority of which are operated by municipalities.

- a) There are 60 existing community yard waste composting sites in the SWRSWC area; and four sites at landfills or transfer stations: Nobles County Landfill, Renville County Landfill, Cottonwood County Landfill, and the Rock County Transfer Station operating yard waste sites, and all are anticipated to continue to operate a yard waste compost site during the planning period.⁶⁷
- b) The four communities of Dawson, Madison, Redwood Falls, and Luverne currently operate curbside yard waste programs and are anticipated to continue. It is not anticipated that additional communities will initiate curbside pickup of yard waste in the next ten years
- 4) The SWRSWC and member counties will continue to provide outreach and promote the current yard waste drop-off sites.
 - a) Promotion will continue to be through ads, public service announcements, and brochures. Especially during the spring and fall, the typical seasons that the compost sites are used most. Promotion will be a reminder to residents that yard waste is prohibited as part of the waste to the MSW and Demo landfills. Expanded outreach will be identified through the Communication Plan.

Specific Programs

In Renville and Cottonwood counties, the operator of the county's landfill will attend instructional classes on yard waste composting as they become available through the MPCA. Additional advertising will be done in Renville County to raise awareness of the benefits of composting and the availability of

⁶⁷ Cottonwood Co Landfill, Renville Co Landfill, and Rock County transfer station operate yard waste sites at the LF / transfer facility properties; Nobles County, Schaap Recycling operates two-yard waste composting facilities

finished compost at the landfill and city sites. Communities with no compost sites will be encouraged to open compost sites.

Cottonwood County: There are 7 communities with corporate limits of the County. The County Landfill has a yard waste and brush site. The city of Windom has a manned yard waste composting site and Bingham Lake, Westbrook, Jeffers, Storden, and Mountain Lake have unmanned sites. The city of Comfrey does not have a yard waste site.

Jackson County: There are 6 communities in Jackson County; five of the municipalities have yard waste composting sites: Alpha, Heron Lake, Jackson, Lakefield, and Okabena. The city of Wilder does not have a yard waste site.

Lac qui Parle County. All 7 of the municipalities in the County have yard waste sites. Two cities, Dawson and Madison, operate curbside pickup programs for yard waste as well as managing a public yard waste drop off site. The cities of Bellingham, Boyd, Louisburg, Nassau, and Marietta have yard waste drop off sites.

Lincoln County. Of the 5 communities in Lincoln County, 4 operate yard waste composting sites: Hendricks, Ivanhoe, Lake Benton, and Tyler. The City of Arco does not compost yard waste *per se*. Instead the City directly land applies grass clippings and leaves to nearby agricultural fields. These sites also manage woody wastes. Woody yard wastes are stock piled until a set amount of fuel is accumulated. At that point the brush piles are burned as weather conditions permit.

Lyon County: There are 11 municipalities in Lyon County; all have access to yard waste composting sites. These sites are maintained by each individual community. In Marshall, there is also a private firm that will collect yard waste curbside.

Murray County: There are 9 communities in Murray County, 6 host yard waste composting sites: Avoca, Currie, Lake Wilson, Slayton, Fulda and Dovray. The cities of Chandler, Hadley and Iona do not have yard waste sites.

Nobles County: There are 11 communities in Nobles County that are served by two yard waste sites. Schaap Recycling operates two-yard waste sites. One is centrally located in the county at the Nobles county Landfill. The second is located conveniently one mile Southwest of Worthington along State Highway 59 & 60 South. This site serves as the City of Worthington's yard waste site. Both sites are posted for identification and hours of operation, fenced and have gates to regulate hours of operation. Schaaps processes the brush into wood chip products, which are made available at no cost to the public. The finished product of compost is also free for the taking. Both sites are permitted and licensed by Nobles County to operate as yard waste management sites.

Pipestone County: There are 9 cities in the county, 5 have yard waste composting sites: Pipestone, Jasper, Edgerton, Holland and Ruthton. In other communities (Hatfield, Ihlen, Trosky, and Woodstock), application of grass clippings or leaves to neighboring agricultural fields is common.

Redwood County: There are 15 cities in the county and all are believed to have composting sites (Belview, Clements, Delhi, Lambertson, Lucan, Milroy, Morgan, Redwood Falls, Revere, Sanborn, Seaforth, Vesta, Wabasso, Walnut Grove, and Wanda. The City of Redwood Falls has curbside or street pickup of leaves, grass clippings and yard waste approximately twice per year.

Renville County: There are 10 communities in Renville County, one city maintains a yard waste compost site (Olivia), and the county operates a yard waste composting facility is at the Renville County Landfill for all residents and commercial businesses. Yard waste is brought to the landfill site by individuals. The County facility is maintained by landfill personnel and county owned equipment. Volumes of composted material are less than 50 cubic yards per year. The cities of Bird Island, Danube, Fairfax, Franklin, Hector, Morton, Renville and Sacred heart do not have yard waste sites.

The City of Olivia picks up trees and brush monthly but individuals must haul their own yard waste to the facility. Trees and brush are burned by individual cities at their local burning sites. Education materials encouraging backyard composting are available from the Solid Waste Office and the County Extension Office.

Rock County: There are 7 communities in Rock County, four host yard waste sites and there is a site available at the Rock County Transfer Station. The City of Luverne has both a Tree Dump site and yard waste site; cities of Hardwick (located at Wall’s Nursery), Hills, and Beaver Creek host yard waste sites. The cities of, Kenneth, Magnolia, and Steen do not have yard waste sites.

Yellow Medicine County: Each of the 9 communities in Yellow Medicine County have yard waste sites: Canby, Clarkfield, Echo, Granite Falls, Hanley Falls, Hazel Run, Porter, St. Leo, and Wood Lake.

Local Market conditions for finished yard waste compost: There is no cash market for yard waste compost. Local gardeners retrieve some material. The bulk of the material is land applied on agricultural lands at no cost to the landowners.

Tonnages collected for the last five years. Data for the tonnage of yard waste collected is not tracked by the counties nor tracked by the four cities that collect MSW (Dawson, Madison, Redwood Falls, and Luverne) and is not available.

Most yard waste sites do not have scales and there is not a reliable consistent method for converting volumes to a weight. Over the next 5 years, the MPCA plans to develop a calculation for yard waste conversion to weight. The MPCA plans to develop the methodology during the summer of 2014 for the 2015 reports through the new RETRAC system. The permitted facilities will report directly to the RETRAC database for future SCORE reports.

Estimates for backyard composting vary by county; Table 35 identifies the estimates of annual yard waste by county.

Table 35: Estimated Back Yard Waste Composting and Actual Known Volumes Collected

*Cottonwood: < 1%	*Lyon: < 1%	*Redwood 3%-5%
*Jackson: <1%	*Murray: 1%	Renville 675 ton (5%)
*Lac qui Parle: <1%	Nobles ¼ ton (597 t in 2011)	* Rock <2%
*Lincoln: 1% *	*Pipestone 3%	*Yellow Medicine <1%
* No survey or measurement has been completed		

Solid waste for use in Agricultural practices. Where there is no nearby yard waste compost site, waste, such as leaves, grass clippings, tree and plant residue is hauled out onto the field and incorporated into the soil.

Environmental Risks of Yard Waste Management. Environmental risk of yard waste management is low. There are, however, some issues that improperly operated facilities may create. The issue of greatest concern is likely to be odor. For a yard waste composting operation to remain free of significant odor nuisance, the operation must remain aerobic. If sufficient oxygen is not available, anaerobic microorganisms will dominate the decomposition process. These organisms do not fully oxidize the organic material, and generate malodorous gasses. Anaerobic conditions can occur if there is too much moisture in the compost pile. They can also occur if the compost pile is too large or compacted. In these instances, air spaces in the pile will be eliminated. This in turn eliminates the available oxygen to keep the process aerobic.

In addition, there needs to be a balance of carbon and nitrogen in the compost feedstock. If there is relatively too much carbon, the composting process will be slow (however, it will not generate much odor). If there is relatively too much nitrogen, the process may result in ammonia emissions, which can be offensive. There is no known significant odor problem at the yard waste composting facilities.

Yard waste composting in occurs out-of-doors. As such there is a risk of excess moisture washing through the compost piles and then entering into the environment. As these compost piles, do not accept MSW or sewage sludge the risk from pile contact water is principally from excessive nutrient loading on waterways. Operating with best practices and proper site design eliminates and mitigates ponding, odor, and other issues. Operating experience indicates that there are limited amounts of leachate generated through precipitation, due the absorbency of compost and compost feedstock.

Yard waste composting facilities are permitted by the MPCA through a permit by rule process. This MPCA oversight helps to ensure that facilities are operated in an environmentally benign manner.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff).

The County Solid Waste Administrator / Environmental Officer is responsible for the county yard waste management program. However County staff relies on the assistance of the city and its employees to maintain the municipal sites. In Nobles County, Schaap Sanitation provides the daily operation of their two sites. In Renville County and Cottonwood Counties, the facility at the landfills is maintained by landfill personnel. In all counties, the city staff was identified as the responsible positions for the yard waste management program. Minimal County staff time (0.09 FTE) is devoted to yard waste management. The majority of the time identified is fulfilled by the SWA, SWA staff or landfill staff. Unless a county has a yard waste facility, most activity is combined with education. Funding sources are the Solid Waste Assessment and landfill tip fees.

Implementation Schedule

- | | |
|----------|--|
| On-going | Education and promotion of yard waste composting and location of drop off sites will be an ongoing effort, with special emphasis on the spring and fall. |
| On-going | Continue to encourage the collection of yard waste by the four communities currently conducting curbside collection. |

V. e. Source Separated Organic Materials Composting

General Policy and Goals

It is a goal of the SWRSWC and its member Counties is to:

- 1) Support source separating of organic materials and Minnesota Statutes and Rules;
- 2) Encourage businesses producing organic waste to use licensed separated organic haulers; and
- 3) Enhance education of the options and collection opportunities of source separated organic materials.

Policies the SWRSWC and its member counties will implement to achieve these goals include:

- 1) Provide information and education to residents, municipalities, and businesses producing organic waste
- 2) Encourage and assist source separated organic composting sites.
- 3) Encourage backyard composting of organic food waste.

Existing Programs

There are no formal source separated organic composting program(s) in the SWRSWC planning region. Three counties have reported SSOC in the 2011 and 2012 SCORE data, however the collection system, location of the composting facility, the composting methods employed, and the finished compost marketing efforts are unknown.

Lac qui Parle County reported 4.5 and 2.25 tons from Lac qui Parle Valley High School where food scraps were collected and placed in a compost bin for use in their vegetable greenhouse. In 2012, food scraps were collected in the spring only.

Lyon County SCORE report identified 114 and 30.35 tons, reported by MPCA as WalMart, located in Marshall, MN.

Murray County reported 27 and 29 tons, Monogram Meats composted casing and local farms land applied the compost.

In addition, Rock County has indicated an informal effort by a small group of individuals who get together 3 to 4 times a year to help promote household kitchen waste composting efforts. Redwood County assembled a large purchase of backyard composters on behalf of the members of the region, for interested counties to sell to their residents.

All counties promote or have access to compost bins for sale to residents in their counties. Redwood County has served as the lead county to purchase these bins (and are purchased by other counties for distribution). The bins are available or residents at cost for composting food waste as well as yard waste. Education components of the composting bins will be included in the SWRSWC Communication Plan as it is developed. This regional program has been in operation for eight to ten years and will continue throughout the planning period. SWRSWC will evaluate opportunities to promote organics diversion as they arise.

At the time of writing of this Plan, the MPCA is updating the rules for Source Separated Organics Facilities. The draft rule modernizes requirements for facilities and is intended to reduce the capital cost for constructing a facility and for operating a facility. A primary goal of the rule revision process is to spur development of additional private and public facilities throughout the state – thereby expanding access to organics recycling.

Environmental and Public Health Impacts

NA

Specific Programs to be Developed

Elements involved with SSO over the next ten years are primarily technical assistance and educational outreach and covered in the staff time under education.

No staff time have been allocated to specifically address SSO, the technical assistance and educational elements are covered in other areas of solid waste management.

Program Budget and Staffing

No funding or staff resources have been allocated specifically toward SSOC.

Implementation Schedule

On-going	The SWRSW and member counties will provide technical assistance to organic waste generators when feasible and will explore opportunities to assist private industry with siting and operating facilities that may expand access to organics recycling within the region.
Annually	The SWRSWC will continue to sponsor the distribution of household composting units.
Ongoing	The SWRSWC and member counties will assist students with assessments and options for composting food waste from institutions. This may include work to identify and partner with existing organizations to encourage the increase source separated organics composting, such as through youth groups like a YES! Team collecting school cafeteria waste food, arranging for it to be transported to a local farmer who mixes with manure and spreads it on his land; or a local restaurant feeding restaurant waste to their pigs.

V.f. MSW Composting Facilities

In 2012, the Prairieland Composting facility located in Truman, Minnesota changed its operation to a Refuse Derived Fuel Facility (RDF), and is no longer composting solid waste.

V. g. Solid Waste Incineration and Energy Recovery**General Policy and Goals**

It is a goal of the SWRSWC and member counties to continue to look for ways to divert waste from landfills through review solid waste incineration and energy recovery facilities as an alternative to MSW landfill disposal throughout the planning period.

Currently, 0.3% of the SWRSWC MSW is delivered to the Prairieland RDF Facility. The Prairieland Facility, as an RDF Facility serves to: *conserve the need for land disposal through reducing the waste stream, and; Recover resources from the solid waste stream.*

- 1) The SWRSWC will encourage member counties with waste currently being processed at an RDF Processing facility to continue this practice throughout the planning period.
- 2) As opportunities present, the SWRSWC will request member counties and Joint Power Boards to include waste incineration as one of the alternatives to study as an alternative to landfilling.

Solid Waste Incineration -

In September 1991, Faribault and Martin County opened the Prairieland Compost Facility. In 2012, the facility changed to an RDF Processing facility. It operates 8 hours per day, 5 days per week as a composting facility has a permitted process capacity of 50,000 tons per year (190 tons per day). The Prairieland Facility currently receives waste from Faribault and Martin Counties and a small amount, 605 tons annually of waste from Jackson County. It is anticipated that about 600 tons from Jackson County will continue to go to the Prairieland Facility. Since the Prairieland Facility has additional capacity, SWRSWC counties and staff will research the feasibility and implementation of use of the facility as landfills prepare to close.

The Prairieland RDF Facility operates under MPCA permit #357. A permit reissuance application was submitted to the MPCA in September of 2011. A new permit was issued on March 6, 2012 and expires March 6, 2017. The current permit allows for the increase of capacity at the facility from 100 tons a day to 190 tons per day.

The Prairieland Facility diverts 90% of waste from a landfill through the production of RDF. The Prairieland Facility separates and recovers both recyclables and RDF from the waste stream which reduces dependence on landfills.

The Prairieland Solid Waste Management Board is a Joint Powers Board between Faribault and Martin Counties and oversees the Prairieland RDF Facility. The Facility processes the MSW into Refuse Derived Fuel (RDF). The RDF is transported to Mankato and used as fuel for Xcel Energy's Wilmarth Power Plant. The facility recovers 90% for RDF and 10% for landfill

The facility has two tipping rates:

- 1) In County (Faribault and Martin Co) = \$35 a ton tipping fee, plus a \$40 Hauler Collected Service Fee. \$75 total
- 2) Out of County = \$80 per ton. The RDF Facility will consider taking waste from other counties.

Currently, Faribault and Martin Counties MSW accounts for approximately 16,000 tons per year. Prairieland will attempt to fill the remaining 34,000 tons of capacity by securing waste from outside of the two

counties. If Prairieland is able to secure waste from outside of the two counties, it may be possible to reduce the tip fee.

Currently, the Prairieland Board has waste delivery contracts in place with nearly all of the solid waste haulers operating in both Faribault and Martin Counties, negotiated during 2011. Prairieland pursued these contracts to further promote stability in the resource recovery and disposal system.

The County has a property-based service charge that contributes to the funding of solid waste management activities, including operations at the Prairieland facility. In addition, the County has imposed a \$40 per ton hauler collected service fee on all haulers. The resulting improvements in operations and financial performance have contributed to greater stability for the County and Prairieland. Martin County, as a member of the Prairieland Board, will continue to support use of negotiated contracts with waste haulers and the hauler collected service fee as a primary waste assurance tool.

- The Prairieland tip fee has been lowered to \$35 per ton and appears to be set at a stable level.
- The \$40 per ton hauler collected service fee ordinance was adopted in 2006
- The County's solid waste management service charge has been reduced, after helping to address short-term financial needs, and also appears to be at a stable level.
- Prairieland has voluntary five year contracts for waste delivery to the facility with the majority of the waste haulers working in the two Counties.
- The solid waste budget for the County and Prairieland are balanced.
- Operations at the Prairieland facility are improved, as is the recovery rate.

Waste Assurance. Waste assurance is a fundamental element of the successful operation of the Prairieland facility. The quantity and composition of waste received at the facility directly affect the facility performance from a RDF standpoint and a financial perspective. An effective approach to waste assurance also contributes to the County's ability to ensure that waste is managed according to the preferred strategies established by the County.

Counties may support environmental programs through a service charge billed on the property tax statement or the utility bill, also pursuant to Minn. Stat. §400.08. The service charge can be structured based on the volume of waste generated or by property type. Typically, residents are charged a lower fee than businesses. Funds may be used to support county waste management programs, including environmental education, household hazardous waste collection, recycling programs, and activities supporting the management of waste as preferred in the county plan.

Process. The processing of MSW into recyclables, refuse-derived fuel (RDF) and residuals is a two-stage process. The following description outlines the process used at the Prairieland Facility.

Tipping Floor. The mixed MSW is delivered by packer trucks to a tipping floor where it is visually inspected for non-processable waste. Non-processable waste is removed by a picker on the tipping floor and a front-end loader and stored for recycling or disposal as appropriate. The tipping floor is sized to allow for several days of storage capacity and ample truck maneuvering area. In addition, facility staff identify and separate

recyclable materials, such as metals, and items prohibited from the waste stream (e.g., tires, appliances, household hazardous wastes).

The tip floor operator uses an articulating loader to put the MSW in a pre-shredder. The operator then pushes the processable waste onto a conveyor for delivery to the processing building.

Processing Building. The conveyed processable waste from the tipping floor is delivered to the hammer mill located within a concrete enclosure. The hammer mill shreds the processable waste to a nominal size of three to six inches. The processable waste is conveyed from the shredder to a magnetic separator and the ferrous material is separated and conveyed to the load out area for transport to market. The remaining waste is conveyed to a two stage trommel screen, which includes 6 inch openings that separate the processable waste into two fractions: less than six inches, and greater than six inches. Greater than six inch material is returned by conveyor to the tipping floor and the less than six inch material is conveyed to the storage and loading building where it either gets compacted into an enclosed semi-trailer or is deposited in the storage area.

The resource recovery rate for 2013 will be a higher percentage than 2012 because the facility will have a full year of producing RDF exclusively.

It is the intent of Jackson County to continue to participate in the Prairieland RDF facility; and the intent of the SWRSWC to increase the volume as feasible. Implementation of diverting waste to Prairieland will include continued SWRSWC and member county studies on the feasibility of transferring waste to the RDF facility.

Implementation Schedule: NA at this time

Budget: NA at this time.

V. h. Land Disposal of MSW**General Policy and Goals**

It is the goal of the SWRSWC and member counties to foster an integrated and regional approach to solid waste management by maintaining an active membership in the Southwest Regional Solid Waste Commission (SWRSWC) Joint Powers Board, and to follow the order and preference of the Waste Management Strategies identified in Minnesota Statute 115A.02.

- 1) The SWRSWC and member counties will lead and encourage residents to reduce, reuse, and recycle and to remove hazardous and banned materials to abate wastes from entering landfills.
- 2) The SWRSWC and member counties will continue to evaluate the alternatives and overall system needs for solid waste management, including a common understanding of MMSW definitions.
 - a. At this time, the SWRSWC and member counties have determined that the most prudent and feasible option is to continue landfilling as the primary means of disposal of MSW. There are four landfills located within the planning area that have planned for the development of a state-of-the-art lined disposal facility designed to meet strict state and federal requirements. Those counties or facility owners have accepted the long-term responsibility of maintaining adequate financial assurance funds to oversee future liability for waste generated in the county. Each of the member counties has explored landfill abatement options through the Southwest Regional Solid Waste Commission and it's creation of a Regional Review of Alternatives. The SRSWC developed an updated 12 county Regional Review of Alternatives in September, 2002 that the member County Boards adopted with the last cycle of County Solid Waste management Plans. The SWRSWC member counties will continue to assess alternatives to landfilling over the next ten years.
 - b. Through the process of the development of the SWRSWC Solid Waste Management Plan, consistent definitions were reached for MMSW, Commercial and Industrial waste, and Construction and Demolition. A glossary of definitions and terms is located in Appendix G.
 - c. Future landfill closings. The Renville County landfill will close within the ten year planning frame. Redwood and Renville Counties have formed a Joint Powers Agreement (JPA) for Solid Waste and recycling and is the deciding body on how the future of solid waste disposal will be handled in the two counties. Once the Renville County landfill has closed, it is anticipated that the waste will be delivered to a nearby facility such as the Lyon County Regional Landfill or the Prairieland RDF facility. That decision will be determined after analysis by the JPA. The remaining three landfills with the 12 counties do not plan to cease operations in the ten year plan framework.
 - d. Siting new landfills - No new landfills are anticipated to be sited within the 12 SWRSWC Counties in the 10 year planning frame.
 - e. Coordination of CON and landfill permits. SWRSWC reviewed and supported the CON request by the Lyon County Regional Landfill. The information presented included waste tonnages, projected tonnages, information about the cells and life of the cells, options including shredding / compacting / MRF. The SWRSWC will make recommendations on all landfill expansion within the commission region. They will follow a process similar to the work on the Lyon County Regional Landfill CON request.
 - f. Expansion of landfills. The Cottonwood, Nobles and Lyon County landfills have sufficient space to expand landfill operations on existing sites. The CON for the Cottonwood County landfill process will initiate before 2018; for the Nobles Co Landfill will initiate before 2022, and the

Lyon County Regional Landfill before 2014. The progress on the status of the CON will be reported to the SWRSWC at their regular meetings.

Land Disposal of MSW Programs - Existing and Future - The SWRSWC Counties primarily utilized four landfills in the region: Cottonwood County Landfill, Lyon County Landfill, Nobles County Landfill and the Renville County Landfill. Two other landfills, Dickinson County (IA) and McLeod County Landfills⁶⁸ took 3% and 0.03% of the regions MSW respectively in 2011.

Table 36 identifies the amount of MSW generated within each County and to what facility it was disposed for the years 2008-2012, as reported in County SCORE reports.

Problem wastes are removed through a variety of programs. The key program is the regional HHW programs operated by Lyon County and Kandiyohi County under contract with the MPCA. Nine of the SWRSWC Counties use the Lyon County HHW facility and three utilize the Kandiyohi County program. Participating Counties also enforce state bans on problems materials and operate programs to ensure that such material is managed properly. Landfills and transfer station operators remove problem wastes if they are observed in the waste flow. Additional activities such as waste pesticide, waste pesticide container, and fluorescent bulb collections also occur in counties.

Pharmaceutical Waste Drop Box Program - Existing / evolving / on-going.

This is a new program, run through individual County Sheriff's offices that provide a secure location for the proper disposal of unused and expired prescription and over the counter medications.

As a newly evolving program, the pharmaceutical waste drop box program it was identified on March 2013 by the SWRSWC as a high priority to implement. This program has a high impact to reduce toxics from the waste stream and easy to implement project that can serve all residents in the SWRSWC service area and utilize existing non-traditional networks to solid waste to extend outreach beyond the current outreach efforts.

The program serves several outcomes: removal of toxics from the waste stream, reduction of toxics from entering water supplies, and decrease in the availability of drugs for abuse. As of the spring of 2013, 11 of the 12 counties have at the minimum of a one day collection event; many have 24 / 7 secure drop boxes⁶⁹.

An implementation plan will be developed through the Plan development during 2013 that will address outreach (on-going), expansion (2013-2014) and expand coordination of collection and disposal (2015-2016). Partners for outreach include the Sheriff's office, County Water Plan Coordinator, Minnesota River Area Agency on Aging. Documentation of toxics removed will be through contact with the Sherriff's office each year to identify how many pounds they took to a disposal facility.

⁶⁸ 29 tons of MSW from Lac qui Parle County went to McLeod County in 2011.

⁶⁹ Lincoln County does not participate.

Table 36: Tons of MSW to Landfills: 2008-2012, and separated by each contributing county; preferred landfill and alternative short term facility if preferred facility cannot accept waste

Years	2008	2009	2010	2011	2012	Prefer landfill	Alt short term landfill
Cottonwood County Landfill	6,520	6,044	7,559	8,697	12,320		Lyon, Renville, Nobles
Cottonwood County	5,890	6,044	7,559	8,593	12,000	X	
Jackson County	0	0	0	104	320		
Murray County	630	0	0	0	0		
Lyon County Landfill	36,159	38,771	36,236	41,800	36,476		Cottonwood, Renville, Nobles
Lac qui Parle County	2,125	2,928	3,052	3,300	3,402	X	
Lincoln County	1,928	1,636	1,802	1,986	1,554	X	
Lyon County	15,139	15,943	14,244	18,500	14,324	X	
Pipestone County	3,873	4,594	4,203	4,000	3,612	X	
Redwood County	6,773	7,023	6,155	6,000	6,008	X	
Rock County	2,061	2,171	3,198	3,560	3,825	X	
Yellow Medicine County	4,261	4,477	3,582	4,391	3,751	X	
Nobles County Landfill	15,621	18,963	17,704	18,000	13,698		Cottonwood, Lyon, Renville
Jackson County	2,176	2,115	2,270	2,815	1,845		
Murray County	2,905	2,882	3,134	3,446	3,578	X	
Nobles County	9,883	13,303	11,600	11,100	7,628	X	
Pipestone County	78	70	84	92	114		
Rock County	579	593	617	544	532		
Renville County Landfill	8,677	7,885	8,340	8,400	8,081		Cottonwood, Lyon, Nobles
Redwood County	527	150	131	243	0		
Renville County	8,150	7,735	8,209	8,162	8,081	X	
McLeod County Landfill	0	0	0	29	14		
Lac qui Parle County	0	0	0	29	14		
Sarona LF (BFI), WI	13	0	0	0	0		
Lac qui Parle County	13	0	0	0	0		
Watertown LF, SD	1,155	0	234	0	0		
Lac qui Parle County	1,155	0	234	0	0		
WMI Spirit Lake, IA (Dickinson County)	4,248	3,304	2,323	2,872	2,828		
Jackson County	2,423	2,145	2,323	2,872	2,828	X	Nobles, Cottonwood
Redwood County	150	0	0	0	0		
Rock County	1,675	1,159	0	0	0		

Source: data numbers SCORE; preferred and alternative short term landfill - counties.

Cottonwood County Landfill (MPCA Permit # MS 143).

The Cottonwood County Landfill is located in section 31 of Dale Township, approximately 4.5 miles northwest of Windom. The existing system is to continue primary landfilling of MSW at the Cottonwood County Landfill until a regional alternative is developed. Current tip fees are \$69.07 / Ton for MSW and \$20.50 / Ton for demolition debris. 100% of Cottonwood County waste and 2% of Jackson County waste is disposed at the Cottonwood County Landfill. The total annual waste receipt is approximately 12,000 tons per year. The facility is approximately 53 acres in size. The facility has 1,131,142 million cubic yards in place of waste, daily cover and final cover material. A new permit was issued in 2003, revised in 2005 and the facility has approximately 388,799 cubic yards of remaining capacity. This capacity will last about 20.5 years at current fill rates. The Cottonwood County Landfill meets all State and federal regulations.

All incoming loads at the landfill are visually inspected to insure that material is acceptable for disposal. Demolition brought to the landfill is directed to the demo portion of the landfill. MSW contaminated demolition loads are either placed in the MSW lined area or the driver must remove the MSW portions of the load before material is allowed to be placed in the demo landfill area. MSW loads contaminated with problem materials are stopped at the gates and the driver is required to remove the problem materials. The most common problem materials are tires, appliances, electronics and household hazardous wastes. Tires are accepted at the landfill for \$0.10/lbs. an additional charge of \$4 per tire is assessed to large tires. Liberty Tire Recycling from St. Martin, MN picks them up on a quarterly basis. A fee of \$10 is charged for the disposal of an appliance. Appliances are then stored at a special site at the landfill until picked up and recycled by S.W. Recycling Inc. out of Willmar, MN. Appliance pickup by this certified company is on a quarterly basis. Electronics are collected at the landfill as well for a charge from \$1-\$45 per item. S.W. Recycling also picks up our electronics. Both MSW and demo loads that contain any HHW are stopped on the scale and removed and placed in the HHW facility located on-site.

Cottonwood County has recently purchased a compactor for the landfill to compact the waste being disposed of there and to extend the life of the permitted cells. According to the GVT, the permitted landfill capacity will be reached early in 2019 and either an expansion will be required or an alternative disposal option will be required.

Summary of Inspections. The MPCA inspects the Cottonwood County Landfill generally in the spring and the fall; for the past 3 years there has been difficulty with headwell 5 showing 1' over the liner limits. The MPCA issued a Notice of Violation (NOV) in 2012 that identified tasks to be completed. The NOV tasks were completed. Ground and surface water is tested as permit requires. Test America and Sample Tech currently take care of the testing needs, Short Elliot Hendrickson oversees and monitor the test results.-

The 8 cell plan was submitted in in 2003 and revised in 2005. A new development Plan was designed in 2013. The county has submitted for a new permit in 2012 to MPCA and is waiting for the permit to be approved. The County opened cell 7 in 2012 and are currently using Phase I of VI of the new development plan. It was anticipated that the six phases would take 10 years to fill at current rates.

However, with the recent purchase of a compactor, it is anticipated that the life of cell 7 will be extended 5 to 10 years.

There is \$1,700,000 currently (August 2013) in financial assurance (closure funds), and \$200,000 for operating expenses, with a \$356,500 loan outstanding to a local bank for the purchase of a new compactor. Annually the landfill works with a \$500,000 budget.

Approximately 450,000 gallons of leachate is collected and hauled to MCES and St James annually. Approximately 19,000 cubic yards of MSW and 4,100 cubic yards of demo are landfilled.

The acting landfill supervisor is Kyle Pillatzki who supervises two full time employees, and oversees the landfill and demolition landfill duties as well as the HHW facility located at the landfill facility.

Specific Programs for the Cottonwood County Landfill: The Cottonwood County Landfill plans to implement additional measures at the landfill that will reduce the amount of waste being landfilled and being added to the landfill. These are as follows:

- 1) Install a roll off container for use by self-haulers with a separate bin for metal to be deposited. This will allow additional removal of recyclables materials from material being landfilled.
- 2) Research for implementation an asphalt shingle reuse project over the next 5 years. Jackson County is piloting a project for the use of the material to be added to aggregate. Initial results are that this is successful.
- 3) Removal of plastic bags from the waste stream and marketing them to a firm that makes curbstops. By weight, this is not a large volume; however, removal of plastic bags from the MSW will reduce the liter of plastic bags at the disposal facility.

Lyon County Landfill (MPCA Permit # SW -23).

The Lyon County Sanitary Landfill is located on 320 acres owned by the County approximately 3 miles south of Lynd, Minnesota (Section 9 of Lyons Township) on the west side of 200th Avenue and east of State Highway 23.

All incoming loads at the landfill are visually inspected to insure that material is acceptable for disposal. Demolition brought to the landfill is directed to the demo transfer site at the landfill. MSW contaminated demolition loads are either placed in the MSW lined area or the driver must remove the MSW portions of the load. MSW loads contaminated with problem materials are stopped at the gates and the driver is required to remove the problem materials. The most common problem materials are tires and appliances. Tires are accepted at the landfill for \$175 to \$185/ton. West Central Sanitation back hauls the tires to St. Martin, MN. A fee of \$15 is charged for the disposal of an appliance. Appliances are then stored at a special site at the landfill until picked up and recycled by S.W. Recycling Inc. out of Willmar, MN. Both MSW and demo loads contaminated with HHW are stopped at the gate and the driver is required to remove the HHW. The driver is then provided with information including the location and hours of operation for the Regional HHW Facility in Marshall.

County facilities and services have included:

- 1) The 19-acre closed, unlined fill area located in the western portion of the property,

- 2) The 21-acre closed, lined fill area located in the central and eastern portion of the property, which is designated as Phases 1 through 8,
- 3) The 8-acre active, lined fill area located south of the closed, unlined fill area, designated as Phase 9A,
- 4) The Landfill office, scale, maintenance building and storage buildings located in the south-central portion of the property, and;
- 5) A tire, recyclables and demolition material transfer area are also located in the south-central portion of the property.

The Landfill was originally permitted as SW-23 by the MPCA on December 28, 1970. Lyon County took over ownership of the Landfill in November 1986 and operation in 1992. On June 14, 1993, the MPCA modified and re-issued the Landfill permit to require lined fill areas. Previously, waste had been disposed of in unlined trenches and area fill. The permit was modified in August 1998 to increase the authorized disposal capacity, and then again in August 2000. The permit was re-issued once again in May 2002, increasing the ultimate solid waste disposal capacity of 2,404,050 cubic yards in the unlined and lined portions of the Landfill, including solid waste and final cover. The permit was modified in December 2002 to allow leachate recirculation as part of a pilot study. In February 2005, the Landfill permit was modified to include the requirement for electronic submittal of monitoring data and again in August 2006 to accommodate adjustments to the Limits Tables of the permit. In May 2008, the permit was reissued to authorize construction of Phase 9A and two leachate storage and treatment ponds. The permit also authorized the removal of a 1-acre closed, Permit-By-Rule (PBR) demolition disposal area as part of the Phase 9A construction. The PBR material was excavated and relocated to an area on top of the unlined closed fill area. The permit was modified in December 2009 with adjustments to the Limits Tables. In April 2012, the permit was modified to allow leachate recirculation as a method of leachate management within designated areas of the Landfill.

Landfill leachate is collected and handled in accordance with the Leachate Management Plan. Leachate collected from the Landfill is stored and treated on-site in leachate storage and treatment ponds, is recirculated back into the Landfill within the approved phases and/or is hauled offsite to a wastewater treatment facility.

Landfill gas management practices are described in the Landfill Gas Management Plan. The Landfill operates an active landfill gas (LFG) collection and control system (GCCS), flaring the collected LFG.

Solid waste was deposited at the Landfill in the unlined area until late 1993. Beginning in 1993, Lyon County constructed 7 lined, 2 to 8 acre cells. To date the landfill has completed the closure of the unlined fill area and Phases 1 - 7. The construction of a lined cell resulted in the collection and storage of leachate in a 15,000 gallon underground, double-walled, fiberglass tank on the south side of the Phase 1 fill area and in 2008 two – 1 million gallon storage treatment ponds.

A Hydro-geologic Evaluation was completed for the Landfill in 1992, with additional evaluations in 1996, 1999, 2002 & 2006 which coincided with landfill expansions.

Facility Environmental Monitoring Summary

The environmental monitoring program for the Landfill includes groundwater, surface water, leachate, and gas monitoring. Thus far, Landfill operation for SW-23 has not resulted in groundwater detection above an intervention limit beyond the Landfill compliance boundary.

Groundwater quality monitoring data is presented to the MPCA in the annual facility reports. As of the issuance of this permit submittal, the most recent annual report included groundwater monitoring data through the end of 2012.

Identification of Potential Receptors

Based on the previous geotechnical information, the potential water resources or receptors that could be impacted by the Landfill were identified. These receptors could include groundwater units, groundwater supply wells or surface water.

Potential impacts will be detected, addressed, or evaluated through the site inspection program and the environmental monitoring program presented in the Environmental Monitoring Plan. Over time the MPCA has allowed the Landfill to reduce the level of ground water testing frequency.

Conclusions from 2012 Annual Report

Two routine groundwater sampling events were conducted at the Lyon County Landfill in 2012. These events took place in April and November and were conducted in general accordance with the Permit.

The groundwater elevations recoded in 2012 are consistent with historical levels. Groundwater flow direction is generally to the south in the water table aquifer and to the northwest in the lower, semi-confined, sand and gravel units.

Few VOCs have been detected in groundwater samples from the Landfill's environmental monitoring system, over the period of record; therefore, no trends or impacts from VOCs have been observed to date.

Low level VOCs were detected in groundwater samples collected and analyzed during the 2012 sampling events, not of which exceeded in intervention limit.

Review of groundwater data for inorganic parameters indicates the Landfill is not causing adverse impacts on groundwater:

- 1) Results from the sampling indicate that the groundwater regime in the vicinity of the Landfill has naturally inorganic parameters within the background water chemistry at concentrations that may be above MPCA intervention limits.
- 2) Historically, arsenic, boron, and manganese have been detected in groundwater from monitoring wells located up gradient and down gradient of the Landfill at concentrations similar in both up gradient and down gradient well locations.
- 3) There appears to be higher concentrations of inorganic compounds in the lower, semi-confined sand and gravel water bearing unit than in the water table.

Therefore, exceedances of inorganic compounds are not likely caused by the Landfill.

Cost of Operation.

Tipping fees at the landfill were established to cover the complete cost for the operations. The fees are examined on a yearly basis and are adjusted as needed. Lyon County will continue to look at having the cost of disposal paid with tipping fees. Appendix A contains costs of operations at the site. The current tipping fee is \$46/ton which includes the surcharge but no taxes.

Financial Assurance

MPCA Solid Waste rules require MSW landfills to develop a financial assurance mechanism, which will be used to pay for closing, post closure care and any contingency actions.

This fund amount is updated annually based on inflation factors and assumptions of closure, post closure and contingency action costs.

The present value of the financial assurance requirements for the Lyon County Landfill are:

Closure Costs:	\$1,167,373
Post Closure Costs:	2,010,481
Contingency Action Plans Costs:	<u>928,168</u>
TOTAL	\$4,106,022

Current value of the Trust Fund is \$3,539,785. The County continues to fund for financial assurance requirements.

Ten Year Planning Period

Dec. 2012	Submittal of re-permitting documents to the MPCA. Present permit expires
Dec. 2013	New Permit issued (anticipated)
June – Dec. 2014	Construction of Phase 10A
2015	permitted capacity of cell reached
2022	Construction of Phase 9B
	Begin working on new Solid Waste Management Plan.

Nobles County Landfill (MPCA Permit # SW11).

The existing system is to continue primary land filling of MSW at the Nobles County Landfill owned by Waste Connections (WC). The facility serves the needs for Nobles County and the regional needs of the surrounding Counties. Current tip fees are \$50.00/cubic yard for MSW and \$9.00/cubic yard for demolition debris. In addition, WC also operates a regional recycling facility in Nobles County and takes recyclable material from surrounding Counties as well. The recycling rate for Nobles County is 63%.

The Nobles County landfill is privately owned and operated by Schaap Sanitation, an affiliate owned by Waste Connections. It operates under MPCA permit SW-11. The Nobles County landfill is located approximately 10 miles northwest of Worthington on County Road #61, in a sparsely populated area. This landfill site occupies 218 acres in the N 1/2 of the NE 1/4 of Section 4, T-102-N, R-41W, of Dewald Township in Nobles County.

Current cells have a compacted clay and composite liner with leachate collection system and methane gas ventilation. Leachate is collected by Pioneer Transportation and is delivered to the Metropolitan

Councils Waste Disposal Facility in St. Paul or to the Waste Water Treatment Facility in Sioux Falls, SD. The landfill has received an MPCA Special Discharge Permit No. 2141 for both locations. There is approximately one truckload a week delivered to one of those facilities. Analytical results of the leachate are recorded quarterly.

This landfill serves the needs of Nobles County, all of Murray County, half of Jackson County, portions of Pipestone, Rock, and Meeker County for the disposal of mixed municipal solid waste, industrial solid waste and demolition debris. On-site is also an area where white goods and tires are collected and stored.

The Nobles County Landfill solid waste management facility permit is currently being managed under the same permit that expired in 2010. The permit renewal application form had been completed and submitted prior to 180 days of the 2010 expiration date. The MPCA has yet to review the renewal application. Regular landfill inspections are made by both the MPCA and Nobles County.

Landfill development will generally proceed from north to south from the limits of waste placement of Phase 1 and progress from east to west for Phases 2 through 5. The landfill is currently operating in Phase 5.

The Nobles County Landfill uses a bond to provide the obligation for financial assurance. The MPCA has received, reviewed and approved the Surety Bond # 1952279 in the amount of \$2,913,611.80. The Bond was effective May 17, 2012. The Bond fulfills the financial assurance requirements and has been found sufficient coverage for the landfill

The Nobles County Landfill is currently operating with originally permitted landfill capacity (OPC). A calculation of remaining Certificate of Need (CON) capacity was conducted for the facility's 2007 Annual Report. According to the 2007 Annual Report, as of January 1, 2008 the remaining OPC was calculated to be 9,342 cubic yards. These calculations are conservative as they were based on gate volumes rather than actual in-place volumes and also include the daily cover volume. Calculations using the in-place waste volumes and removing the daily cover would predict that the OPC volume will be exhausted sometime in 2020. The landfill is currently going through the application process with MPCA to obtain a new CON capacity for the landfill.

All incoming loads at the landfill are visually inspected to insure that material is acceptable for disposal. Demolition brought to the landfill is directed to the demo portion of the landfill. MSW contaminated demolition loads are either placed in the MSW lined area or the driver must remove the MSW portions of the load before material is allowed to be placed in the demo landfill area. MSW loads contaminated with problem materials are stopped at the gates and the driver is required to remove the problem materials. The most common problem materials are tires and appliances. Tires are accepted at the landfill for \$3 to \$ 25 per tire. Liberty Tire Recycling from St. Martin, MN picks them up on a quarterly basis. A fee of \$25 is charged for the disposal of an appliance. Appliances are then stored at a special site at the landfill until picked up and recycled by S.W. Recycling Inc. out of Willmar, MN. Appliance pickup by this certified company is on a quarterly basis. Both MSW and demo loads contaminated with HHW are stopped at the gate and the driver is required to remove the HHW. The driver is then provided with information including the location and hours of operation for the Nobles County HHW Facility in Worthington and the Regional HHW Facility in Marshall.

Historically, operational inspections by the MPCA of this facility show that it has been very well managed. During the last five year period, (2008-2012) there have been no violations as the result of any inspections from the State or County officials.

Nobles County expects to spend 2.00 full time equivalents of staff time on solid waste management activities over the next few years. It will also aggressively pursue grant possibilities that will provide supplemental staff to existing solid waste management staffing.

It is Nobles County's goal to develop self-sustaining programs whenever possible.

It is the policy of the county to use the dedicated SCORE and HHW grants received from the State for their intended purposes. Funds from a recycling assessment collected in the county are used to supply the required 25% SCORE matching funds. A recycling fee assessment on businesses and household (\$1.50/county and \$2/city per household, \$2/business per month) was established in 1990 and the amount of county/household waste was changed from \$1.50 to \$2.00 in 2008. A 15% local surtax on landfill tipping fees for all MSW, except curbside residential, was also established in 1990. The county also receives \$2/cubic yard from the landfill as per the state statute authorizing the Greater Minnesota Landfill Cleanup Fund.

Specific Programs to be Developed for the Nobles County landfill: The Nobles County Landfill is permitted at this time. Nobles County is committed to helping the Nobles County Landfill and Schaap Sanitation in the permitting process in any manner possible. As a member of the SRSWC, Nobles County remains committed to the development of a regional system.

Renville County Landfill (MPCA Permit # SW-090).

The original permit issued to the Renville County Sanitary Landfill was for an unlined land disposal facility in 1972. This portion of the facility was permanently closed in early 1994 in compliance with state and federal requirements. A properly maintained cover system will reduce the leachate generated at this facility and minimize any potential environmental impacts. An approved groundwater monitoring system and financial assurance fund will insure that timely mitigation or remediation activities occur as required by current or future regulations.

Regarding the proposal to construct a new lined disposal facility, a mandatory Environmental Assessment Worksheet (EAW) was prepared and public noticed in May, 1991. A negative declaration was issued in July 1991, which concluded this project does not have the potential for significant environmental effects. A modified permit was issued by the MPCA in November, 1991 for construction of the lined land disposal facility with a leachate collection and groundwater monitoring system. Renville County began using the first completed new cell in June, 1994. The permitted design capacity of 413,000 cubic yards is expected to last approximately 29 years. Table 36 shows the tons of MSW disposed at the facility in 2008 to 2012.

All mixed municipal solid waste collected in the county goes to the Renville County Sanitary Landfill for disposal. There has been no MSW processed at Renville County Landfill. The tipping fee in 2012 at the landfill was \$50.00 per ton (\$15.01/yd³).

Renville County Landfill has removed scrap metal for recycling from the waste stream since it was constructed in 1972. Since 1985 tires have been prohibited from being disposed of at the landfill. As other materials, such as yard waste, batteries, major appliances, and commercial electronic goods have been banned from land disposal; landfill personnel watch for and remove them from the disposal area. Continued training of county operators will allow them to deal with other prohibited materials such as paint, oil, oil filters, other household hazardous waste, or other materials banned in the future.

The facility is centrally located within the county and accepts MSW, industrial waste, demolition waste, recyclables, yard waste, and problem materials at the same location for the convenience of the county's citizens. Household hazardous waste is accepted at the County's less than 90 day facility and transported to the regional facility located about 25 miles north on Highway 71 in Willmar.

Specific Programs for the Renville County Landfill - Phase I of the permitted landfill expansion started in July 1993 and was completed in June 1994. This lined expansion area includes approximately 1.5 acres and lasted through 1996. Cell II was constructed in 1999 with an approximate capacity for 6 years. The Renville County Sanitary Landfill permit, #SW-90, is due to expire in September 2014 at which time the facility design, capacity, operating procedures, and emergency plan will be re-evaluated to make improvements and remain in compliance with the regulations in effect in 2014 to coincide with re-permitting the landfill. The final cell was constructed in 2010 and final closure is estimated to be 2022. Upon closure, MSW from Renville and Redwood Counties will go to the Transfer station in Redwood Falls and be managed by the Joint Powers Authority

A Financial Assurance fund is maintained as required by state and federal regulations, and an annual report is reviewed by the MPCA. Renville County will continue to fund this account. The current balance (September 2013) of the Trust fund is \$2,500,000 and will be adequate to cover the closure, post closure, and contingency plan.

Leachate is currently permitted (#2105) for disposal at the Metropolitan Council - Wastewater Services facility in St. Paul. Should this option become unavailable to us, another method for leachate treatment, such as land application, will need to be developed.

County Transfer Stations. County Transfer stations are located in Rock, Lincoln, and Murray, Counties. While there is always some amount of risk in the handling of MSW, there are no known specific environmental or public health threats associated with the operation of the County Transfer Stations.

Responsible Person and Required Staff Time. The County Environmental Officers are responsible for all programming relating to the landfilling of MSW generated in Rock, Lincoln, and Murray Counties, should such programs be required. Operation of the County Transfer Stations will continue to be the responsibility of the County Environmental Officer. Staffing requirements for the transfer stations are 25% FTE in Murray and Rock County and 50% in Lincoln County.

In Lincoln County, the day to day operation of the Transfer Station and the C & D Landfill is the under the direction and supervision of the Lincoln Co Environmental Office, as well as other responsibilities including, but not limited to storm water permitting and reporting requirements, staff training, annual solid waste reporting, facility permitting, solid waste management plans, site inspections, etc. Staffing requirements for the Lincoln County Transfer Station are 0.5 FTE (based on the operation of the Transfer

Station itself, and not the other components of the operation which include appliances, fluorescent bulbs, waste oil and waste oil filters, tires, etc.)

In Murray County, the day to day operation of the Transfer Station and the C & D Landfill is the under the direction and supervision of the Murray County Solid Waste Department, and includes other responsibilities including, but not limited to storm water permitting and reporting requirements, cell development, staff training, annual solid waste reporting, facility permitting, solid waste management plans, site inspections, etc. Staffing requirements for the Murray County Transfer Station are 0.25 FTE (based on the operation of the Transfer Station itself, and not the other components of the operation which include C & D Landfill, appliances, fluorescent bulbs, waste oil and waste oil filters, tires, etc.)

In Rock County, the day to day operation of the Transfer Station and the C & D Landfill is the under the direction and supervision of the Rock County Engineer at the Rock County Highway Department, as well as other responsibilities including, but not limited to storm water permitting and reporting requirements, cell development, staff training, etc. Other responsibilities such as annual solid waste reporting, facility permitting, solid waste management plans, site inspections, etc., are the responsibilities of the County Environmental Officer. Staffing requirements for the Rock County Transfer Station are 0.25 FTE (based on the operation of the Transfer Station itself, and not the other components of the operation which include C & D Landfill, appliances, fluorescent bulbs, waste oil and waste oil filters, tires, etc.)

Source of Financing for the Transfer Stations. The operation of the Rock County Transfer Station is financed through county general levies, solid waste assessments, and fees paid by the facility users. The Lincoln County Transfer station is financed through county general levies and through fees paid by facility users. Transfer station users are charged \$2.00 per bag of MSW delivered to the facility. Disposal fees cover approximately fifty percent of total transfer station operating costs. The Murray County Transfer Station is financed through tipping fees and solid waste assessment. The capital equipment on-site is a 1978 Terex Loader.

Implementation Schedule for Transfer Stations. Rock, Lincoln, and Murray Counties anticipate implementing no landfill related programs during the planning period. Operation of the transfer stations will continue on an on-going basis. On-going activities will include site maintenance, and site staffing, and necessary operator training.

Capital equipment owned by Rock County is the transfer station facility, roll off boxes, scale office and weigh scale, shop/storage building, 2010 Caterpillar backhoe, and 3 steel cargo containers, and are expected to remain serviceable through the planning period. Capital equipment owned by Lincoln County is the transfer boxes and a small shed. The roll off boxes are expected to remain serviceable through the current planning period. Capital equipment owned by Murray County is a Terex loader and is expected to remain serviceable through the planning period.

It is estimated that in 2016-2017 (when then Renville County MSW Portion of the Landfill closes), the Redwood/Renville Regional Solid Waste Authority will begin using the MSW Transfer portion of the Redwood Renville Regional Recycling/Transfer Facility located in Redwood Falls to transfer waste from both Redwood and Renville Counties. The Solid Waste Authority will determine where the waste will be transferred (Landfilling, WTE, or RDF) and bill the respective counties for waste disposal. Demolition

waste will continue to be accepted from both Renville and Redwood County’s at the Renville County Demolition Landfill, until there is no longer space to accept material from either county.

Closed landfills and their status⁷⁰. The Minnesota Pollution Control Agency (MPCA) Closed Landfill Program (CLP) is a voluntary program established by the legislature in 1994 to properly close, monitor, and maintain Minnesota's closed municipal sanitary landfills. After the landfill owners/operators enter into an agreement with the MPCA and complete the requirements set forth in that agreement, the owner/operators are issued a Notice of Compliance that once issued, the MPCA assumes responsibility for any remaining cleanup work, closure construction, and long-term care of the landfill.

The CLP determines the risk to public health and safety and the environment at each site using a scoring model, based on hazards present at each site (monitoring data and field observations), the conditions that exacerbate those hazards (example: subsurface conditions), and the likelihood the public will be exposed to those hazards (distance to wells and buildings, population density). Landfills with high risk scores receive a high ranking or priority. This list helps the CLP prioritize where it will take response actions (Table 37).

Table 37: MPCA Closed Landfill site risk priority score, land use at the closed landfill property

County	Site risk priority score ⁷¹	Site risk Rank	Current uses at the property
Murray	7276	10	MPCA CLP Program - MSW Transfer Station, Demolition Landfill is in operation.
Yellow Medicine	2575	33	MPCA CLP Program – Closed
Rock	2026	39	MPCA CLP Program -MSW Transfer Station, Demolition Landfill is in operation.
Pipestone	975	69	MPCA CLP Program – Closed
Redwood	881	74	MPCA CLP Program – Closed
Jackson	246	100	MPCA CLP Program - Closed
Lincoln	228	104	MPCA CLP Program MSW Transfer station. Lincoln County staffs the transfer station and ensures the separation of MSW from the demolition debris. The facility includes one roll off box that is available for MSW and a second roll-off for demolition waste. The facility is open from 12 pm to 4 pm Wednesdays and 8 am to 12 pm on Saturdays. The transfer area comprises approximately two acres of the 35 acre site area. The facility has capacity to accept no more than 60 cubic yards of waste, and has low potential for adverse effects on human health and the environment and is a permit by rule (Permit in Appendix B). Lincoln County will maintain an MSW transfer station to ensure that a convenient location is available for MSW disposal for County residents without collection service, or for residents with bulky wastes

⁷⁰ Annual reports of the closed landfills are located at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup/closed-landfills/closed-landfill-program-site-annual-reports.html>.

Lac qui Parle County does not have a landfill.

⁷¹ The CLP determines the risk to public health and safety and the environment at each site using a scoring model, based on hazards present at each site (monitoring data and field observations), the conditions that exacerbate those hazards (example: subsurface conditions), and the likelihood the public will be exposed to those hazards (distance to wells and buildings, population density). Landfills with high risk scores receive a high ranking or priority. This list helps the CLP prioritize where it will take response actions.

The LCA requires the MPCA to develop a Land Use Plan (LUP) for each qualified landfill in the CLP. All local land-use plans must be consistent with the MPCA's LUP. Future consideration of uses at closed landfills are renewable energy, such as solar voltaic. If this option is found to be a viable use, the LUP will need to be checked or a change requested to allow the use.

Site(s) for Railroad ties and treated poles - Existing / New / research / evaluate for implementation / on-going. The current reuse of treated ties and poles is landscaping, the remainder go to landfills. Research on other uses of the treated lumber will continue throughout the planning period with the objective of keeping as much out of the landfill as possible. As new uses are identified, it may be necessary to develop sites – for the collection / storage of the treated lumber for reuse.

Environmental and public health impacts: Proper site management and operational procedures will minimize any potential problems which may occur at the disposal facilities. Inspections of the facility are conducted regularly by the MPCA and County Solid Waste Officers to identify and correct situations in a timely manner. Daily operations are performed by the landfill staff under the management of the Solid Waste Officer. In addition, the MPCA permit, Contingency Action Plan, and Emergency Response Procedure are documents available on-site as a reference, and annual training is conducted to update staff on changing operational procedures.

The four landfill counties do not believe there is not a potential for significant environmental effects from the operation of these facilities.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff for MSW Disposal).

County responsible persons and staff time are the SWA, SWA staff, Landfill staff, and Secretary / Office Manager for an aggregated 10.37 FTE (and is included in the budget for land disposal of MSW). Non county individuals include the MSW hauler, Lyon county, the Leachate hauler, Water Testing Labs, and Engineering and consulting. Sources of financing include the Solid Waste Assessment and Landfill Tipping Fees.

Implementation Schedule

2016	The Redwood-Renville JPA will research and review environmentally sound and alternatives for MSW disposal
2016	The Redwood-Renville County JPA will provide reports to and maintain communications with the SWRSWC the MSW disposal options under consideration.
2016-2017	Renville County landfill closes and the Redwood- Renville County JPA selects a disposal facility.
On-going	The SWRSWC and member counties will lead and encourage residents to reduce, reuse, recycle, and to remove hazardous and banned materials to abate wastes from entering landfills.
On-going	The SWRSWC and member counties will continue to evaluate the alternatives and overall system needs for solid waste management.
On-going	The SWRSWC will review certificate of need requests at MSW disposal facilities.

V. i. Waste Tires**General Policies and Goals**

It is the goal of the SWRSWC and member counties to develop an integrated system for collection for tire reuse or recycling within or nearby the SWRSWC Region..

- 1) The SWRSWC and member counties will continue to explore and promote services that will promote the use of waste tires in the region.
 - a) One new initiative being investigated is in Jackson County (see county specific information).
- 2) The SWRSWC member counties each have Solid Waste Ordinances that include provisions regulating disposal of tires. The ordinances for all counties meet or exceed the MPCA rules regarding waste tires. State law prohibits the land disposal of waste tires. The Counties will continue to enforce tire related elements of the county solid waste ordinances.
- 3) The counties require, through the Solid Waste Ordinance, proper permitting and use of waste tire transporters and waste tire processing facilities to ensure that waste tires are collected and disposed of in an environmentally safe manner. This activity will continue throughout the planning period.
- 4) Existing tire management is through tire dealers and sites at the landfills and transfer stations.
 - a) The counties will also continue to provide referrals for disposal options to county residents seeking to dispose of tires.
 - b) Tire management will continue to be addressed in educational outreach materials, which includes dissemination of printed material regarding tire management.
- 5) The tires are collected and transported by licensed tire haulers and taken to tire processing facilities. Some tires have parts that are used (cut from the tire) and used in the agricultural industry as weights for feed / silage piles.
- 6) The SWRSWC will continue to monitor ways to reuse tires which may mean stockpiling at locations until a sufficient quantity is available for cost effective transportation to a facility.

Waste Tire Programs - Regionally, approximately 2000 tons of tires are generated annually. Table 38 identifies the volume of tires by county and identifies the seven of the SWRSWC Counties that host sites to accept waste tires (Table 38) and the private tire dealers collect tires in the remaining counties.

Ordinances: The County Solid Waste Ordinances have been updated to meet or exceed the MPCA Rules 115A.914 subdivision 3, and Minnesota Rules Chapters 9220.0220 to 9220.0680.

Tire dumps. There are no known unpermitted tire dumps in the Region.

Tire transporters and disposal facilities (end uses) include:

- Monitor Tire transporter license WT-421, St Francis, MN. Tires are ground into crumb rubber or chipped for the Big Stone Power Plant for fuel.
- Local tire dealers and service stations do not regularly report to the County regarding tire disposal. However, larger tire dealers reported that they use a variety of firms to transport and manage used tires. These include Monitor Tires.

Table 38: Permitted storage and processing sites for waste tires:

County	Permitted storage sites for waste tires	Volume
Cottonwood	County landfill serves as a central tire collection/ transfer site along with private tire dealers.	99.8 tons
Jackson	Private tire dealers.	20.4 tons
Lac qui Parle	County demolition disposal site and private tire dealers	14.4 tons
Lincoln	Private tire dealers	11.8 tons
Lyon	County Landfill and private tire dealers	51.9 tons
Murray	Murray County Demolition Facility and Transfer Station along with private tire dealers	17.5 tons
Nobles	County Landfill and private tire dealers. Once a year tire collection (price based on disposal cost)	42.8 tons
Pipestone	Private tire dealers and directs residents to Rock County transfer station facility	19.1 tons
Redwood	No collection site for tires. Residents rely on private auto garages for disposal of tires for a fee.	32.0 tons
Renville	Majority of used tires are handled by tire dealers. The county landfill also accepts tires. Renville also holds a yearly county-wide tire collection cleanup (disposal price is reduced).	31.1 tons
Rock	Tires are accepted at the Rock County Transfer Station for a fee based on weight. Large private tire dealer located at Manley, MN	19.3 tons
Yellow Medicine	Tires are collected privately for a fee	20.7 tons

Source: Volume of Tires from the GVT

County specific programs

Cottonwood: Waste tires are collected and stockpiled at the landfill facility, at no time are more than 5,000 tires stored on-site. Scrap tires are collected by Liberty Tire Recycling and are processed and refined by size reduction techniques designed to achieve a range of particles sizes as small as 600 microns. Various mesh sizes of crumb rubber become the ideal raw material for a variety of applications, including molded rubber goods and adhesives.

Jackson: Tires are collected by the private sector (mostly tire shops), and some are used by local farmers for weighing down tarps covering silage piles. The Jackson County Highway Department is looking at using an emulsion product that contains ground tires mixed with oil for fog sealing over a new seal coat project.

Lac qui Parle: Tires are primarily managed through private sector in the county; those that sell tires take tires at a charge. The county has held one tire collection in 2012 and wants to continue this practice either once per year or every other year. The demo landfill also takes tires at a fee.

Lincoln: Tires are primarily managed through the private sector tire in the County. There are several businesses which sell tires. Two of the major dealers are Tyler Tire Center, in Tyler and the Lyon County Cooperative in Ivanhoe. These firms will accept waste tires, generally for two dollars each. They will take tires from the general public. There are no tire processors located in Lincoln County. The County will consider accepting tires at the Transfer Station for temporary storage and transfer to a recycling facility.

Lyon: Waste tires are primarily managed through private sector businesses that sell tires. These are usually included in the business cost tire replacement, but also can often be accepted for a fee. These businesses ship to tire processors. Several of the larger stores are Graham Tire, Pomp's Tire, Royal Tire, Tires Plus, and Wal-Mart. The landfill also accepts tires for a per pound fee. The landfill also accepts tires during their one day problem material collection events. Tires from the landfill are shipped to the tire processing facility in St. Martin.

Murray: Waste tires are accepted at the demolition landfill where they are temporarily stored and transferred to a tire recycling facility.

Nobles: Waste tires are accepted from businesses and residents at the Nobles County Landfill. These tires are collected and shipped quarterly to a tire processing facility. Monitor Tire is currently used for the transport and processing of tires stockpiled at the landfill.

The County holds an annual tire collection every summer for the residents and businesses of the County. The one day collection is held at the Nobles County Public Works facility, and is well received by its' residents. The cost per tire is reflective on the prices that the hauler charges. The total tons of tires collected range from 28 tons to 12 tons depending on the year. Liberty Tire Recycling picks up the tires the day after the collection.

Businesses that sell tires also accept waste tires from customers and have them processed for a fee. Education and technical assistance is provided by the Environmental Office on proper disposal practices. The solid waste ordinance on waste tire management was updated in 1993 to meet MPCA rules 9220.0200 to 9220.0680. Nobles County is not aware of any illegal waste tires piles within the County. Illegal tires stockpiled will be prosecuted under the Solid Waste Ordinance.

Pipestone: Businesses that sell tires also accept waste tires from customers and have them processed for a fee.

Redwood: Retail establishments within the county that sell tires are accepting waste tires for a small fee. These tires are then transported to a recycling facility such as Monitor Tire for final disposal. Although Redwood County assumes there may be unpermitted tire dumps in the County, the county is not aware of any and no enforcement action has been taken in recent years.

Renville: When a truckload of tires accumulates at the landfill, they are transported for disposal by Monitor Tire. Although Renville County assumes there may be unpermitted tire dumps in Renville County, the county is not aware of any and no enforcement action has been taken over the past 10 years. Renville County intends to continue this program over the ten year planning period.

The County holds a yearly county-wide cleanup and tires are accepted from county residents at the event at a reduced rate. Tires collected are transported to Monitor Tire by a licensed hauler. Dealers that accept tires within the county are Revere and Keltgen, located in Olivia, and Farmers Co-op Oil in Renville and Sacred Heart. Tires stored at these facilities are transported to various recyclers who process them for sale to fuel end markets.

The County Solid Waste Ordinance was updated in 1995 to include tire provisions. The County will continue to monitor and respond to illegal tire dumping and storage complaints as laid out in the Renville County solid waste management ordinance.

Rock: The Rock County Transfer Station accepts tires for disposal (for a fee) on-site. Businesses that sell tires also accept waste tires from customers and have them processed for a fee, or the cost of disposal is included with the installation. Manley Tire directly works with vendors for tire recycling and/or disposal. Education and technical assistance is provided by the Environmental Office on proper disposal practices. The county will continue to monitor and respond to illegal tire dumping and storage complaints as identified in the Rock County solid waste management ordinance.

Yellow Medicine: Tires are primarily handled by private sector businesses that sell tires. They are charged a fee and the tires are shipped to a tire processor. The County holds a one day collection event in several communities at which tires are accepted. Event collected tires are brought to the Lyon County Landfill for shipment to a tire processor in St. Martin, MN.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff for Waste Tire Management).

There is an aggregated 0.79 FTE staff time devoted to tire management. Staff positions that are responsible for the program include the SWA, SWA Staff, HHW Staff, Landfill staff, Secretary / Office Manager and County Board. Funding Sources for this program are SCORE, Solid Waste Assessment, problem material disposal fees, and landfill tip fees.

Implementation Schedule

- On-going Enforcement of solid Waste Ordinance provisions relating to transport, processing, and disposal of tires.
- On-going Work with the public and private sector for reuse purposes of waste tires, preferred in or near the 12 county area.

V. j. Electronic Management**General Policy and Goals**

It is the goal of the SWRSWC and member counties to ensure all electronics are managed and disposed of properly and in an environmentally safe manner.

- 1) The SWRSWC and member counties support Federal law that compels companies such as Sony or Sharp to recycle a percentage of what they sell and that number includes electronics from households.
 - a) The SWRSWC will support additional policy and laws that require manufactures to address product stewardship options for customers.
- 2) The SWRSWC and member counties will continue public education efforts regarding electronic management, which will be further detailed in the Communication Plan and managed in the annual update of the guidance document.
 - a) Annual costs to be incurred to implement and manage electronic products management programs for next ten years, include itemize capital and operating costs;
- 3) The SWRSWC and member counties will provide or ensure there are collection options for processing, recycling, and / or disposal of electronics.
 - Currently, residents and businesses may dispose of their electronics through the County Household Hazardous Waste (HHW) Facilities, with the exception of Redwood County that has annual collections. There is a charge to residents and businesses. The residential fee is determined by what electronic item they are disposing. Businesses must pay a fee per pound.
 - Continue to work with companies (private sector) to pick up electronics and recycle them; current companies used to pick and recycle electronics are: Millennium Recycling from Sioux Falls, SD or Green Lights Recycling out of the Twin Cities, S and W out of Willmar, Minnesota.
- 4) Continue to measure the volume of electronics being recycled, regionally, 371.7 tons are collected annually⁷².

Specific e-waste programs by county to be maintained

Cottonwood County accepts e-waste at their HHW facility from 10 am to 2 pm Monday – Friday. An annual collection is held near the end of summer where 20 geylords are collected. In 2011, 20.6 tons of e-waste was collected⁷³.

Jackson County holds an annual collection at the fairground in mid-august. This collection yields 25 geylords. According to the GVT, 23.3 tons of e-waste are recovered.

Lac qui Parle County collects e-waste 1st Saturday / month at the Demo landfill for a fee – Dawson and Madison hold spring clean ups where electronics are collected for a fee. Radio shows and local advertising are used to educate. According to the GVT, 27.2 tons of e-waste are recovered

⁷² The State needs to change its statute for e-waste to improve on this program

⁷³ 2011 Annual Quantity Recovered Source: County and SWRSWC GVT

Lincoln County accepts CRT's & Electronics during regular hours and by appointment at the HHW facility on Wednesday and Saturday. 32 gaylords are collected and according to the GVT 11.0 tons of e-waste are recovered.

Lyon County accepts e-waste at the Regional HHW facility and the County Landfill during normal business hours for a nominal fee. Goodwill (in Marshall) accepts computer CPU and Monitors for free. Lyon County promotes e-waste recycling events through general solid waste education programs, and targeted advertising. An event is held two times each year. Forty + gaylords are filled at each event and according to the GVT 48.0 tons of e-waste are recovered.

Murray County accepts e-waste at the recycling facility and will consider one day collection events in the future. According to the GVT, 3.9 tons of e-waste are recovered.

Nobles County promotions and education on the importance of proper electronic disposal will continue. There are electronics that need to be disposed of properly and collecting them every week at the HHW Facility (open 7 am to 7 pm) is good ways to accomplish that maintain, expand, or implement this goal. Over 70 gaylords are collected, and according to the County SWA 15.0 tons are collected annually.

Pipestone County accepts e-waste free from County residents by appointment and during our weekly collection held on each Wednesday at the County HHW facility, according to the GVT, 68.5 tons of e-waste are recovered annually.

Redwood County uses promotions, advertising, and education to help residents realize their options for recycling e-waste. Bins for handheld devices located at each of the city hall location.⁷⁴ Two major collection events are held each year. According to the GVT 30.0 tons of e-waste is recovered each year.

Renville County recovers 95.0 tons of e-waste each year.

Rock County works with 5R Processors of Ladysmith, Wisconsin, for the past two years for an annual e-waste collection event; prior to that with Millenium Recycling. The County coordinates with 5R to pick up semi-loads of e-waste and appliances, when we have accumulated enough material to fill a 53' semi-trailer (~24 pallets of material). When there are 10 gaylords or more, Millennium Recycling or Green Lights will stop by a HHW Facility, pick up the electronics and drop off gaylords for the next pick up. According to the GVT, 14.2 tons of e-waste are recovered each year.

Yellow Medicine County holds an annual event each spring. This one day event is held for several hours in three communities: Granite Falls, Canby, and Clarkfield. A private operator in Porter, MN (A to Z Recycling) collects and accepts e-waste throughout the year. The County promotes e-waste recycling

⁷⁴ Residents are encouraged to recycle used electronic devices through county's spring or fall e-waste collection events. These one day events are held at the county fairgrounds to accommodate the volume of people that participate. In the past several years, the cost for disposal has steadily declined and many items are accepted for free, the exception of anything with a screen or monitor which is subject to a fee of \$5.00 per item. The registered recycler is Southwest Recycling of Willmar MN. Redwood County typically charges residents the same fee that is charged by SW Recycling; the costs incurred to the county include the county personnel, building rent if any, advertising costs, administrative costs and incidental costs such as miscellaneous supplies. This has proven to be a very cost effective method of handling electronic waste. In the future, waste disposal fees and contractor information will need to be evaluated to ensure the county gets the best deal and the best service for their residents.

events through general solid waste education programs, and targeted advertising. According to the GVT, 15.0 tons of e-waste is recovered annually.

County collections

Some counties hold one day collections events to collect unwanted electronics and to keep them from illegally entering the MWS disposal stream.

Public Education - Existing / on-going

The counties will continue to educate the public about e-waste by focusing on this subject at least a month before one of the spring or fall collections. Information will be placed in the area newspapers and adds will be aired on the AM and FM radio station informing residents about the upcoming events.

In Redwood County, small (35 gallon fiber drums) containers have been delivered to each city in Redwood County, allowing residents to dispose of small, hand held electronic devices such as cell phones, Walkman radios, i-pods and other devices on a regular basis. These containers are typically located at the City Hall or similar locations, and allow for convenient disposal of items that might otherwise simply be thrown in the trash. A large, colorful sign is placed on each container reminding the public that these items are to be recycled, not tossed. This constant reminder and other educational pieces help residents remember that they have another way of disposing of these devices without having them go in the trash. Redwood County participates in bi-weekly radio shows; the subject is discussed in detail so that everyone understands the program.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff for E-waste Disposal).

There is an aggregated 1.3 FTE County Responsible persons for electronic products program. County responsible positions include the SWA, SWA staff, HHW staff, landfill staff, secretary / Office Manager, and county board. Funding for this program comes from SCORE, Solid Waste Assessment. Problem material disposal fees and landfill tip fees.

Implementation Schedule

- | | |
|----------|--|
| On-going | The SWRSWC will support a change in state and federal legislation to enable the e-waste program to improve and address product stewardship. |
| Annual | The SWRSWC member counties will hold e-waste collections – and /or maintain the operation of the HHW facilities in order to ensure options are available for collection, recycling and disposal. |
| On-going | Work with the private sector to collect, transport and recycle appliances. |
| On-Going | The Communication Plan will address public education efforts for e-waste collection, processing / recycling / disposal. |

Annual Measure the volume of electronics being recycled using SCORE data and report to the SWRSWC at the November meeting on the status.

V. k. Major Appliance Management**General Policy and Goals**

It is the goal of the SWRSWC and member counties that residents and businesses are provided with affordable, easily accessible appliance recycling opportunities that meet all state regulations and requirements. .

- 1) The SWRSWC supports member counties current ban of white good from disposal at landfills; enacted July 1, 1988.
- 2) The SWRSWC and member counties will ensure collection options are available for residents, either through the private sector or as needed through the public sector to ensure all white goods are disposed of in an environmentally safe and appropriate manner, including recycling.
 - a) Used appliances are collected by retailers in the counties and are picked up and transported by licensed appliance recyclers.
 - b) The SWRSWC and member counties will encourage residents to take part in utility incentive programs when they are available.
 - Residents in the utility service areas of Minnesota Power, Otter Tail Power and Xcel Energy utilize ARCA Inc to pick up and recycle second working refrigerators and freezers to reduce energy usage by older appliances; approximately 69 working used appliances were recycled in 2011 through utility incentives.
 - Great River Energy Utility Cooperatives offer rebates to their customers when purchasing an energy star refrigerator or freezer and have documentation of the recycling of the older appliance.
 - c) Each of the SWRSWC counties will continue to collect appliances, sometimes charging a fee for certain items.
 - d) Several of the SWRSWC Counties will continue to offer periodic one day collection events for appliances as needed, specific county programs will be listed by county.
- 3) The SWRSWC and member counties will continue to provide outreach regarding how and where to recycle appliances in an environmentally sound manner via the Communication Plan which will develop generic material for appliance management, with addition information and weblinks on the proposed SWRSWC Website. Unique education efforts will be identified by county.

The existing programs are working for appliance management, and counties plan to continue the programs in the future. Table 39 identifies the appliance recyclers utilized by the counties in southwest Minnesota.

The Goal Volume Table identifies the number of appliances generated annually. The SWRSWC area generates 1,234 tons of appliances annually. Table 40 identifies the tons of appliances by county generated annually.

Table 39: Appliance Recyclers utilized by the SWRSWC Counties

Appliance Recycler	Cot	Jac	LqP	Lin	Lyo	Mur	Nob	Pip	Red	Ren	Roc	YM
Southwest Recycling, Willmar, MN					X			X	X	X		X
Dynamic Recycling, La Crosse, WI		X										
Mike Bauman Appliance Recycling, Mankato							X					
Eagle Appliance, Westbrook	X					X	X					
Olson Sanitation			X									
Millennium Recycling, Sioux Falls, SD							X				X	X
A to Z Recycling, Porter MN				X								
ARCA Inc	MN Power, Xcel Energy, Otter Tail Power service areas											

Table 40: Tons of Appliances Generated

Cottonwood 70	Lyon 155.7	Redwood 179
Jackson 61	Murray 52.4	Renville 250
Lac qui Parle 68	Nobles 128.3	Rock 58.1
Lincoln 37.5	Pipestone 111	Yellow Medicine 63

Source: County GVT’s

Compliance Process: Before recycling, the county and the private sector (retailers) arrange for removal, storage, and proper disposal of all capacitors containing polychlorinated biphenyls, mercury-containing components, and chlorofluorocarbons (CFC’s). All appliance recyclers contracted by the counties are required to have the necessary state certificates to handle CFC’s and PCB’s.

Specific Programs to the Counties

The existing programs are working for appliance management, and the SWRSWC member counties plan to continue the existing management.

Cottonwood: The HHW facility at the landfill stockpiles appliances and they are periodically removed by a contracted salvage firm. The landfill limits the white goods (appliances) to 100 units; landfill charges are \$10.00 per unit; RV appliances are \$50.00 per unit

Jackson: The County holds an annual appliance collection in conjunction with the e-waste collection, held in the middle of August at the county fairgrounds. The charge is \$10/ appliance and they are loaded directly on a semi-trailer and are usually hauled away within 24-48 hours. Collection throughout the year is not feasible due to the lack adequate space for storage.

Lac qui Parle: Appliances are accepted at several retailers and salvage yards in the county; and at the Demo Landfill for a fee of \$10 for appliances with Freon and \$5 without Freon. Microwaves are collected through electronic waste collections. The cities of Dawson and

Madison hold spring cleanup day and appliances are collected for a fee. The County recently lost their appliance collector and now uses Olson Sanitation to pick up the appliances at the demo landfill, when needed.

Lincoln: There are a limited number of appliance dealers in Lincoln County; the County accepts used appliances for recycling at the Lincoln County Transfer Station for a fee of \$5 per appliance. This facility is located on US Highway 75 one mile south of the City of Ivanhoe and is open two days per week for four hours per day. The appliances are stockpiled until such time as there is sufficient numbers to warrant collection by an appliance-recycling firm (approximately 40 appliances). The cost of accepting and storing the appliances is minimal as they are almost entirely included in the fixed costs of operating the site.

Lyon: The residents and businesses in the County have several options for the disposal of used appliances. Appliance retailers can accept trade-ins, local solid waste haulers can collect the appliance for delivery to the landfill, or individuals and businesses can self-haul to the Lyon County Landfill during normal business hours, or to special collection events hosted by the County. Fees vary for waste haulers or appliance retailers. The landfill charges \$15 per appliance, except during the collection event in which the fee is reduced to a minimal charge/appliance. Southwest Recycling (Willmar, MN) collects appliances from the landfill on a regular basis. The county promotes the proper disposal/recycling of these materials.

Murray: Appliances are accepted at the Demolition landfill and transported when there is a sufficient number to fill a load by Eagle Appliance; and are accepted by appliance dealers.

Nobles: Residents and businesses in Nobles County have three options for the disposal of white goods: disposal of white goods at the landfill for \$25/appliance, working with retailer to take the used appliance, or by dealing directly with a waste appliance recycler.⁷⁵

The County revised the Solid Waste Ordinance in 1992 which restricts the number of white goods which can be stored outside a premise to five (5) appliances without first obtaining a permit from the County.

The county provides education efforts to inform residents and businesses about proper waste white goods management. The sheriff's department picks up illegally dumped white goods and brings them to the landfill for recycling.

Pipestone: The County uses Southwest Recycling out of Willmar and accepts appliances and electronics every Wednesday free of charge to all Pipestone County residents at the County Household Hazardous Waste Facility.

Redwood: Redwood County typically holds two appliance collection events per year. These events are held in the spring and fall, and the registered recycler is Southwest Recycling of Willmar Minnesota. Redwood County typically charges residents the same fee that is charged by SW Recycling, so the costs incurred to the county will include only the county personnel, building rent if any, advertising costs, administrative costs and incidental costs such as miscellaneous supplies.

⁷⁵ Nobles Cooperative Electric offers a rebate for replacement energy star replacement refrigerators and freezers, the rebate form includes a requirement for a dated receipt from the appliance recycler.

In the past few years, these appliances have been picked up from residents at no cost to the public, and the events have been very well attended. In the future, waste disposal fees and contractor information will need to be evaluated to ensure the county gets the best deal and the best service for their residents.

Renville: When approximately 20 appliances have been received at the county landfill, Southwest Recycling of Willmar, MN is contacted to pick them up for processing. Before renewing the county contract, or contracting with a new recycler, the county will contact the MPCA to verify the contractor’s compliance with regulations, and to review any operating complaints or violations. Renville County holds a yearly county-wide cleanup where are accepted from county residents at for a reduced rate.

Rock: There are a limited number of appliance dealers in Rock County, and is in close proximity to the retail center of Sioux Falls, South Dakota. The County accepts used appliances for recycling at the Rock County Transfer Station for a fee of \$15 per appliance. This facility is located at 1236 North River Road one mile east and three quarters of a mile north of the City of Luverne and is open five days per week for seven hours per day. The appliances are stockpiled until such time as there is sufficient numbers to warrant collection by an appliance-recycling firm. The cost of accepting and storing the appliances is minimal as they are almost entirely included in the fixed costs of operating the site.

Yellow Medicine: Residents and businesses in the county have several options for the handling of used appliances. These include retail appliance stores, solid waste haulers, A to Z Recycling in Porter, MN, or at special collection events. Fees vary depending on the service. The county promotes the proper disposal/recycling of these materials.

Estimated Program Budget and Responsible person (see Appendix A for county and aggregated budgets and staff for Appliance Management).

The SWA, SWA Staff, and landfill staff are the primary position responsible for the appliance management program. Management of the program is included in the waste education budgets, HHW programs and landfill management. Minimal time is necessary for appliance management program since the majority is managed through the private sector.

Implementation Schedule

On-going	Continue the county supported collection of appliances and one-day events.
Ongoing	Encourage through public education and outreach for the collection and recycling of white goods through private sectors and the public sector.
On-going	Continue to encourage the private sector reuse and repair of appliances.
2014-2015	Incorporate into the Communication Plan generic material for appliance management, with addition information and weblinks on the proposed SWRSWC Website

V. I. Automotive Mercury Switches, Motor Vehicle Fluids and filters, and Lead Acid Batteries and Dry Cell Batteries

General Policy and Goals

It is the goal of the SWRSWC and member counties to support Minnesota State Law (Minn. Stat., sections 116.92, 115A.916, 115A.915, and 115A.9155 respectively that prohibit the disposal of automotive mercury switches, motor vehicle fluids and filters, and lead acid and dry cell batteries in solid waste disposal facilities and to ensure there is an environmentally sound disposal option.

- 1) The SWRSWC and member counties will continue to reflect these disposal bans as mandated by the State of Minnesota and prohibit disposal of automotive mercury switches, motor vehicle fluids and filters, and lead acid and dry cell batteries from disposal in MSW.
 - a) County ordinances prohibit the placement of used oil and vehicle filters in MSW and on or in the land unless approved by the MPCA.
 - By statute, retailers of motor oil and filters are required to provide access to at least one nongovernmental site for collection of used motor oil and used motor oil filters from the public within a city or town with a population of greater than 1,500 outside the seven-county metropolitan area⁷⁶.
 - The SWRSWC Counties will continue to promote the proper collection and storage of waste oil to prevent the disposal of used oil from going into MSW, public waters or on the land by providing a convenient opportunity throughout the area for the disposal of this waste.
 - (1) Automobile service stations will accept used oil from the general public. Fewer locations will accept used oil filters. Those accepting filters are identified in the county specific areas. Minnesota Statute 325E.115 obligates all retailers who sell more than 1,000 oil filters per year for off-site installation to accept up to ten gallons and ten oil filters from individuals at no charge.
 - b) By ordinance and state law, the counties will continue to enforce the ban on the disposal of dry cell batteries containing mercury, silver oxide, lithium, nickel metal hydride, nickel cadmium or sealed lead-acid at a solid waste disposal facility and require transporters of lead acid batteries to deliver the batteries to a lead acid battery recycling facility. Battery management, based on the type of battery involved, it is normally collected and handled with a variety of mechanisms, some which were established by the State. State law requires any establishment selling lead-acid batteries to also accept used batteries from customers and Minnesota Statutes established a five-dollar surcharge that is refundable when motor vehicle batteries are returned for recycling. The statute requires motor vehicle battery retailers to accept motor vehicle batteries free of charge. When a new battery is purchased, the customer may avoid the surcharge by returning a used motor vehicle battery.

⁷⁶ Minn. Stat. section 325E.112

- Auto battery retailers are required to accept used lead acid batteries from consumers and recycle them (Minn. Stat., sections 325E.115 and 325E.1151).
 - Legislation banned the use of mercury in dry-cell batteries and the SWRSWC encourages recycling of these batteries and will continue to provide public sites for collection that will be maintained in the planning area. Each county maintains a list, updated annually, of the collection sites for used oil and filters. Access to these lists will be as well as education materials will be identified in the Communication Plan, and be posted on the SWRSWC website.
 - (1) Since the passage of the legislation requiring a deposit on auto battery cores was enacted, very few lead acid batteries have come to the area landfills.
 - (2) Collection of nickel cadmium batteries will continue to be available at HHW collections, as well as at the Kandiyohi or Lyon County HHW facilities. Regional HHW collection facilities will continue to accept such materials from Very Small Quantity Generators for a fee.
 - No auto batteries are allowed in the landfills for disposal.
 - The SWRSWC believes that the state regulation provides for adequate recycling opportunities and wishes to ensure that all residents are aware of the hazards of improper battery disposal and informed as to the best management method available.
- c) The SWRSWC promotes the removal of products with mercury from MSW disposal, including mercury switches in motor vehicles. Products with mercury have been banned from disposal in all twelve counties.
- The SWRSWC Counties will work with the MPCA during the planning period to educate businesses that crush vehicle bodies about (Minn. Stat. section 116.92, subd.4c) and the removal of mercury switches.
 - The SWRSWC Counties will continue to accept automotive mercury switches from VSQGs at their respective HHW facilities.
- 2) The SWRSWC and member counties will continue seek practices to ensure that there are facilities accessible to businesses and residents, which accept for proper management: mercury switches, vehicle fluids, oil filters, lead acid batteries, and other batteries banned from disposal.
- 3) The County Landfills and transfer station staff will continue to monitor incoming loads and remove all banned material found in incoming wastes.
- 4) The SWRSWC and member counties will continue to provide information and outreach to the general public on the proper management of automotive mercury switches, motor vehicle fluids and filters, and lead acid batteries through the SWRSWC website and other media venues.
- The SWRSWC is committed to the continued recycling of alkaline and zinc air batteries in an effort to promote the importance of recycling other miscellaneous household-generated material and to divert more waste from the landfills and will provide a variety of educational information regarding proper disposal of all types of

batteries, including why they are hazardous, why it is important to recycle them. In the future, this information will be incorporated into the Communication Plan

- With the development of the Communication Plan, there will be a reduction in the duplication of effort through development of generic templates for the member counties. The Communication Plan and will also assist in outreach efforts.
- Promotions and education on the importance of proper disposal of mercury switches, waste oil disposal and batteries will continue. Information about the importance of keeping automotive problem materials, how and where to disposal of them are currently being addressed by individual counties
- Education for do-it-yourself on proper disposal of used oil is being conducted through the county household hazardous waste programs, and will be incorporated into the Communication Plan.

In the SWRSWC area, 74.0 tons of antifreeze, 93.0 tons of oil filters, 538.4 tons of used oil, and 1,204.5 tons of vehicle batteries are collected. Table 41 identifies the quantities of materials collected annually by county.

Table 41: Quantity (tons) of Automotive Fluids, Filters, and Batteries Recycled

	Cot	Jac	LqP	Lin	Lyo	Mur	Nob	Pip	Red	Ren	Roc	YM
Antifreeze			2.1				45.5		8.5	20.0		
Oil filters	6.0	21.1	3.4	3.0	12.0	4.1	10.0	6.0	9.9	8.0	4.5	5.0
Used Oil	9.0	8.0	27.7	20.0	21.0	7.0	17.1	12.0	386.0	15.0	7.7	8.0
Vehicle batteries	72.0	63.0	44.6	37.0	159.0	53.6	131.2	58.9	356.7	105.0	59.5	64.0

Source: County GVT's

Specific programs that are different from the programs implemented by all counties are identified below.

Cottonwood: The landfill accepts used oil filters and plans to continue to accept them.

Jackson: The County advises residents to drop filters at local repair shops and the fee is usually minimal (\$1). Batteries and mercury switches are accepted at the county HHW Facility and collected by Lyon/Nobles when they pickup other HHW.

Lac qui Parle: The County advises residents to drop filters at local repair shops and there may be a small fee. Batteries and mercury switches are accepted at the regional HHW Facility.

Lincoln: Used oil filters are accepted by: Lyon County Oil Cooperative, Ivanhoe, which is a service station and an auto parts retailer. Given the small population in the county and limited disposal options, the county accepts used oil filters for a fee (\$1 per used oil filter) at the transfer station located 1 mile south of Ivanhoe (1962 270th Street, Ivanhoe, MN).

Lyon: Waste oil and oil filters can be dropped off at the Regional HHW facility in Marshall, or at the Lyon County Landfill. There is a \$0.25 fee for Oil filters. Hoffman Filter Service (St. James, MN) collects used oil and filters on a regular basis. Lead Acid and rechargeable batteries are

accepted at the HHW Facility. Lead acid batteries are sent to Alter Metal in Marshall, while rechargeable batteries are sent to RBRC via Veiola Environmental Services.

Murray: The County advises residents to drop filters at local repair shops and the fee is usually minimal. Batteries and mercury switches are accepted at the county HHW Facility and collected by Lyon/Nobles when they pickup other HHW.

Nobles: Waste oil and filters can be dropped off at the Nobles County Recycling Center in Worthington. The charge for small oil filters like car oil filters is \$0.50/filter. The charge for large oil filters is \$1.00/filter. For a fee, some service stations will accept oil filters. The Nobles County Household Hazardous Waste Facility, in Worthington, also accepts waste oil and filters at no charge. Hoffman Filter Recycling out of St. Cloud picks up the oil filters and Randt Oil out of Litchfield picks up the oil that is received at the Recycling Center.

These lead acid batteries can also be dropped off at the Nobles County HHW Facility.

Button batteries or rechargeable batteries are accepted at HHW collections and also at the Nobles County HHW facility. These batteries are shipped to either Exide Inc. out of Sioux Falls, SD or through Rechargeable Battery Recycling Corporation (RBRC). Nobles County includes the proper disposal of batteries in its' waste education program.

Pipestone: Waste oil can be dropped off at the Household hazardous waste building. Some service stations accept oil filters for a fee. Some service stations accept used oil free of charge.

Redwood: Service stations within the county generally accept used oil from the public for proper disposal. The Redwood County Highway Department facility in Redwood Falls also accepts used oil and filters from the general public.

Lead acid batteries are collected at retailers and dealers located throughout the county, and nickel cadmium, button batteries, and other rechargeable batteries are accepted at the Redwood County HHW facility. Redwood County includes information on proper battery disposal with its other waste education efforts.

Renville: The 7 larger dealers in the county that generate these wastes have arranged for their own recycling pick-ups. a drop off site is available at the landfill facility.

Since 1990, Renville County has been collecting used oil from the public at the county landfill for pick up by J & J Waste Oil, an approved used oil transporter. On-going education through news articles is being handled by the household hazardous waste program. Used oil filters are being collected at the landfill drop-off site and at five other locations throughout the county where the end use is fuel: Farmer's Co-op Oil in Renville, Farmers's Co-op Oil in Sacred Heart, Honzay's Oil in Olivia, M & W Auto Clinic in Bird Island, Weis Oil in Fairfax, and Renville County Landfill in Olivia. The landfill facility is serviced by Hoffman Filters service from St. James, Minnesota. If lead acid batteries come to the county landfill, they are placed in a concrete box for collection by Seaforth Salvage approximately 4 times per year

Rock: Rock County collects used oil and used oil filters from the public at the county transfer station for pick up by Environmental Energy, formerly TJ's Oil Service, located in Sioux Falls,

South Dakota. On-going education through news articles or other promotional efforts is handled by the household hazardous waste program.

If lead acid batteries come to the county landfill, they are taken to a local repair shop and retail dealer of lead acid batteries.

Yellow Medicine: The County advises residents to drop filters at local repair shops and the fee is usually minimal. Batteries and mercury switches are accepted at the County HHW Facility and collected by Lyon County when they pickup other HHW.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff for Automotive Products Disposal).

A total of .59 FTE regionally is needed for the program. County Staff positions are SWA, SWA staff, HHW Staff, landfill staff and Secretary / Office Manager. Financing sources are SCORE, county assessment, problem material disposal fees and landfill tip fees.

Implementation Schedule

- | | |
|-----------|---|
| On-going | The Landfills and County transfer stations will continue to monitor in-coming loads and cause to have removed banned materials. |
| 2014-2015 | Development of the Communication Plan that addresses outreach for automotive mercury switches, motor vehicles fluids and filters, and lead acid batteries and dry cell batteries. |

V. m. Household Hazardous Waste (HHW) Management**General Policy and Goals**

It is the goal of the SWRSWC and member Counties to reduce the amount of household hazardous waste generated and to divert HHW from the mixed municipal waste stream; to provide citizens with a safe, easy opportunity to dispose of HHW; and ensure proper management of hazardous wastes generated by farms and Very Small Quantity Waste Generators.

1. The SWRSWC and member counties will continue to provide access to HHW disposal to all residents in the 12 county area through the operation of HHW facilities and / or through annual collection events; Table 42 identifies the HHW facilities by county
2. The SWRSWC and member counties will continue to participate in the Regional HHW programs through Lyon and Kandiyohi counties.
3. Education will continue for the residents in the proper management of household hazardous wastes through waste education publications, during HHW collections and waste exchanges. Promotion on the use of non-hazardous chemical substitutes to its businesses and residents will also continue.
4. The SWRSWC supports the MPCA policy of the proper management of fluorescent lamps to insure that all businesses and residents are aware of the hazards of improper fluorescent bulb disposal and informed as to the best management methods available. Residents and businesses will continue to be encouraged to take their fluorescent bulbs either to the County HHW Facilities or Recycling Centers⁷⁷ where a fee may be charged for handling and disposal. The SWRSWC and member counties will also strive to provide information within the region about other public and private organizations who provide fluorescent bulb and other hazardous waste disposal services within the region. Other public and private organizations may include some electric utilities, home improvement centers (such as Menards), and others.
5. Continue current broad based education program, focusing on HHW reduction, reuse of usable products and use of non-hazardous alternatives and continued operation of the HHW facilities.

Table 42: HHW Facilities by SWRSC County

County	Year constructed / operational	Permitted at greater than 90 day facility	< or > 90 day
Cottonwood	2012	July 3, 2012	greater
Jackson	1993	Jan 24, 2000	greater
Lac qui Parle	none		2 collection / yr
Lincoln	2002	Sept 5, 2006	greater
Lyon	2002	July 18, 2002	greater
Murray	2000	June 19, 2003	greater
Nobles	2002	Feb 6, 2002	greater
Pipestone	2012/2013	Dec 7, 2012	greater
Redwood		Jul 18, 2002	greater
Renville	Sept 17, 2001		Less than
Rock	2000	Sept 5, 2006	greater
YM	Mar 6, 2002		Less than

Source: MPCA and County SWA's

Specific HHW Programs – Existing and to be continued over the planning period:

Renville and Lac qui Parle Counties are members of the Kandiyohi County Regional Household Hazardous Waste Program. This regional facility is located in Willmar and is open from 8 am to 4 pm, Monday through Friday. The Kandiyohi Regional HHW Collection Center continues to be available as a Regional program for residents, who may drop HHW off at no cost. The facility is staffed by Kandiyohi County. Materials collected at this site are processed for transportation (lab packing or bulking) and then shipped with a licensed hazardous waste transport firm to approved and permitted hazardous waste disposal facilities. In addition, the facility operates a materials exchange. Materials that are suitable for reuse are displayed, and any resident of the area may take such products as are useful at no charge.

Lyon County Regional HHW Program. The Counties of Cottonwood, Jackson, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Rock and Yellow Medicine are members of the Lyon County Regional HHW Program. This facility is open 8 am to 4:00 pm Monday through Friday, the second Saturday of the month from 9am to 2 pm, and by appointment. The Lyon County Regional HHW Collection Center continues to be available to program residents, who may drop HHW off at no cost. The facility is staffed by Lyon County. Materials collected at this site are processed for transportation (lab packing or bulking) and then shipped with a licensed hazardous waste transport firm to approved and permitted hazardous waste disposal facilities. In addition, the facility operates a materials exchange. Materials that are suitable for reuse are displayed, and any resident of the area may take such products as are useful at no charge. Staff from Lyon and Nobles Counties assists member counties of the Lyon County Region HHW program with collection events.

Cottonwood County constructed in 2012, the HHW facility is a greater than 90 day facility and accepts household paints, batteries, chemicals; for a fee, florescent bulbs and ballasts are also collected. The county plans to continue to operate the facility over the planning period.

Jackson County operates a greater than 90-day HHW facility; open from May through October on the first Monday and the third Saturday of each month. The hours on Mondays are 9-11 and 12-3, and Saturdays are 9-11. The facility accepts all HHW, waste oils, mercury switches, batteries and florescent bulbs. An annual mobile HHW collection is held on a rotating basis in Lakefield or Heron Lake (every other year). The mobile collection is also done with cooperation from the Lyon/Nobles County Regional HHW mobile facility. When the facility is at capacity, the Lyon/Nobles County Regional staff come and assist in emptying it out (lab pack on-site and haul it away for proper handling and disposal at their facilities).

Lac qui Parle County holds two one-day collections each year for resident, May and September. Veolia is hired for these events as well as help from the Kandiyohi Regional Facility. Fluorescents collected at the demo landfill are picked up by Retrofit Recycling.

Lincoln County constructed and began operation of a 90-day HHW facility in 2002, construction funded through a \$20,000 grant from the Lyon County Regional Landfill. The greater than 90-day facility is staffed by Lincoln County, it operates 2 days a week for 4 hours a day and by appointment. A spring cleanup/pick up and is scheduled and during the month of October the HHW facility is manned specifically for residents. The County Environmental Officer assists in collection events throughout the region to ensure that there are adequate numbers of trained staff on-hand at collection events. These activities are planned to be continued.

Lincoln County also participates in a number of other programs, which separate and manage hazardous wastes from the MSW stream. Lincoln County conducts eight fluorescent lamp collections annually. These collections ensure that the mercury contained in fluorescent lamps is separated from the waste stream and recycled. Lincoln County also coordinates with the Minnesota Department of Agriculture in the implementation of waste pesticide collections that are conducted in compliance with Minnesota Statute 18B.065. Further, Lincoln County organizes and conducts waste pesticide container collections, fulfilling obligations under Minnesota Statute 18B.135. The County conducts the waste pesticide container collection for area chemical dealers to increase efficiency and reduce the burden on local agricultural chemical dealers.

Lyon: Staffs the Regional Facility and provides assistance to member counties at their HHW facilities and collection events.

Murray: The County has a greater than 90 HHW Facility where HHW is accepted year round. Currently, no special collection events are held; however, it is a future activity that will be considered. The county conducts a waste pesticide container collection for area chemical dealers and farmers. In addition, a container is located outside the Recycling Facility to accept triple rinsed chemical containers if farmers are unable to attend the one day collection. The county also maintains a paint exchange program at the HHW facility. They accept bulbs year-round for a fee and are disposed of through certified business that accepts such waste.

Nobles: provides assistance to member counties at their HHW facilities and collection events. Both the Nobles County HHW Facility and the Nobles County Recycling Center are licensed lamp

storage facilities. They accept bulbs year-round for a fee. The Nobles County HHW Facility disposes of their bulbs through Green Lights and the Recycling Center disposes of theirs through Retrofit. Both of these companies are out of the Twin Cities.

Since 1994, Nobles County has conducted an education campaign about the importance of proper fluorescent bulb management. Over 3,500 bulbs are collected annually at the Nobles County HHW Facility. Since 1991, Nobles County has had a contract with the Lyon County Regional HHW Program; and since that time, Nobles County Environmental Service and Extension have had an on-going education campaign that centers on HHW abatement and the use of substitutes.

In 1994, Nobles County purchased a HHW Mobile Collection Unit and leased a power unit to pull it. A HHW technician was hired and received the proper training required by the MPCA. The mobile unit is operated by Nobles County in conjunction with the Lyon County Regional HHW Program. HHW collections are held throughout Nobles County.

The HHW is lab-packed, bulked, and transported to the regional facility in Marshall. A state-contracted hazardous waste disposal company picks up the waste at Marshall and properly recycles or disposes of it.

The mobile collection unit provides to the residents of Nobles County, and surrounding counties, the opportunity to dispose of hazardous waste without a lengthy trip to the regional facility in Marshall or their counties HHW facility. Easily accessible HHW collections close to home have proved successful. In addition to servicing Nobles County residents, the collection system and technician have been made available to other counties.

In August of 2000, Nobles County received a Solid Waste Processing Facilities Capital Assistance Program (CAP) Grant from the Office of Environmental Assistance (OEA). Nobles County was awarded \$150,000.00 to help fund the construction of a permanent Household Hazardous Waste (HHW) Facility that is located in the city of Worthington. The facility is a greater than 90 day storage facility. The total cost of the Nobles County HHW Facility was \$307,846.57.

In April of 2002, Nobles County opened its' Household Hazardous Waste Facility in Worthington that is open year round. Any resident from Nobles County can drop off their HHW free of charge with the exception of florescent bulbs and electronics. The Facility is open every Tuesday from 9:00am to 4:00pm. The facility is also open on the first Saturday of each month April to October from 9:00am to noon. There is a trained technician on staff that handles all the HHW that comes into the facility. Nobles County will continue to provide mobile unit opportunities for other counties in SW Minnesota in 2013 - 2022 Provide collections to the outlying communities (Nobles County); continue the existing HHW program; and add fluorescent bulb management rules to Nobles County Solid Waste Ordinance.

Pipestone: The County operates a greater than 90 HHW facility, open one day each week and by appointment for HHW collection and fluorescent bulb collection. The county annually holds a waste pesticide container collection for the agricultural community.

Redwood: Redwood County collects Household Hazardous Waste at its greater than 90 day facility on the first and third Tuesday of each month, for a total of 24 “regular” collection days. The county will often hold “mobile” HHW collections in some of the smaller outlying communities within the county, depending on the perceived need for such a collection. In the past, these collection events have been staffed for approximately two to four hours in several small cities on the same day. Staff workers from the regional HHW facility are on hand to assist with these collections and process the waste on-site or back at the regional facility. The Redwood County facility also maintains a “product exchange room” where residents can pick up good, usable materials at no additional cost. These programs have been very successful and truly benefit the residents of the county. This program will continually be evaluated and adjustments made accordingly.

Renville: Household hazardous wastes from Renville County are collected at the less than 90 day HHW facility at the landfill and transported to the regional facility at Willmar. Newspaper articles are regularly written educating households about toxics reduction and proper disposal methods. The need for future HHW collection events will be reviewed and evaluated each year and future collection events will be coordinated with the regional facility. Articles will continue to be written for all local newspapers to teach people about reducing and separating household hazardous waste from the waste stream.

Rock County operates a greater than 90-day HHW facility and is staffed by Rock County operating on an appointment basis, which can be made for the 1st and 3rd Thursdays of each month. To effectively capture HHW, Rock County hosts an annual HHW collection event, typically held in the late spring of the year. This event is held at the facility, with coordination with the Regional HHW Program and staff from Lyon and Nobles counties. County residents have the opportunity to bring material to a nearby and convenient location for disposal through the one-day collections or by appointment. The regional HHW program staff lab pack the material collected at the annual event and transport the HHW to their respective facilities for further shipping. The locally owned equipment offers significant cost savings relative to hiring licensed private-sector hazardous waste transport firms for one-day events. Cost is further controlled through regional pooling of labor. The County staff has assisted in collection events throughout the region to ensure that there are adequate numbers of trained staff on-hand at collection events. Once material is collected, either at the at Marshall drop off center or through one-day collection events, the material is stock piled at the Lyon County facility or Nobles County facility. Once sufficient volumes are stored, arrangements are made for disposal. Material is prepared for transport and disposal through bulking of materials or lab packing. This regional program is under contract with the Minnesota Pollution Control Agency. The remaining portion of the disposal fee for Rock County HHW is charged back to Rock County. Rock County also pays for the cost of the Mobile Collection Unit service. However, in the past, Lyon County has provided some financial assistance to Rock and other counties. This assistance has been distributed from landfill revenues and is intended to limit hazardous materials being disposed in the Lyon County Landfill. Through this program, one or two-day collection events are sponsored within Rock County annually. Fluorescent lamp bulbs and ballasts can be taken to the Rock

County Transfer Station facility for disposal, year around, during the normal business hours of the facility.

Yellow Medicine: Operates a less than 90 day HHW facility for residents. The County works with the Lyon County Regional HHW facility. An annual collection of waste pesticide containers is held and coordinated with Lyon and Murray counties.

All member counties participate in Minnesota Department of Agriculture Waste Pesticide Collections, and Waste Pesticide Container Collections.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff for the HHW programs).

Regionally, 4.67 FTE of county Staff are needed to operate the HHW programs. Responsible county staff include: the SWA, SWA staff, HHW staff, landfill staff, and secretary / office manager. Lyon county and non-county staff (Pinnacle) is responsible for the program. Sources of financing include: SCORE, Solid waste Assessment, MPCA funding, GMLCF Refund, problem material fees, landfill tip fees, and charges to other counties

Implementation Schedule

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|----------|---|
| On-going | Operation of HHW facilities and / or one day collections to provide access to residents in the planning area. |
| On-going | Continue to participate in the Regional HHW Programs. |
| On-going | Continue annual participation in the Department of Agriculture Waste Pesticide Collection and Waste Pesticide Container Collection. |
| On-going | Continue education and outreach on HHW, which will be further enhanced through the Communication Plan and website development. |
| On-going | Continue to promote use of non-hazardous chemical substitutes to its businesses and residents. |
| On-going | Promote BMP's on the proper management of fluorescent lamps. |

V. n. Land Disposal of Construction and Demolition Waste**General Policy and Goals**

It is the goal of the SWRSWC and member counties to ensure that demolition debris is managed in a cost effective and environmentally sound manner through disposal at a facility permitted by the Minnesota Pollution Control Agency (MPCA). The SWRSWC and member counties recognize that construction and demolition landfills are needed for the variety of activity that occurs in the region including: new construction and rehabilitation of buildings, tax forfeiture properties in communities, dilapidated homesteads (cannot be burned and buried), and demolition disposal needs generated by storm events.

1. It is the policy of SWRSWC member counties to direct construction and demolition debris to the nearest C&D facility and reduces the amount of debris disposed illegally.
 - a. The SWRSWC and member counties will continue to direct construction and demolition debris to the nearest C&D facility.
 - b. The County owned and operated C & D facilities will continue to operate the facilities for construction and demolition only. Whenever possible, recyclable materials will be encouraged to be removed. The public demolition landfills will continue to address opportunities for demolition waste re-use and recycling.
 - c. As needed, assist other sites to be developed and utilized in accordance with MPCA permit-by-rule requirements.
2. The SWRSWC will encourage member counties to include C & D facilities during their Comprehensive Plan updates and Zoning Code reviews. The Jackson and Rock County Plans / Ordinances may serve as examples on how to address C & D facilities.
3. The SWRSWC and member counties will promote deconstruction BMP's through their Communications Plan.

Table 43: Construction and Demolition Landfills and Volumes

Facility Name and Permit # and County located	Waste Action	Amount	Units	Remaining Capacity	Remaining Design Cap.	Remaining Life
Cottonwood Co Sanitary Landfill, SW-143, Cottonwood	Landfilled	2809	tons	31012	15586	20.5
Lac Qui Parle Co Demolition Landfill, SW-473, Lac qui Parle	Landfilled	4010	cy	45816	45816	11.4
D&G Demolition Landfill, SW-600, Lyon	Landfilled	4987	cy	49007	49007	8.5
Lyon Co Demolition Landfill, SW-501, Lyon	Landfilled	11200	cy	87483	87483	7.9
R & G Demolition Landfill, SW-612, Lyon	Landfilled	1533	cy	173466	173466	112
Murray Co Demo Debris Landfill, SW-451, Murray	Landfilled	1908	cy	8089	72789	56
Nobles Co Landfill Inc, SW-11, Nobles	Landfilled	6247	cy	9719	43119	2.7
Double D Demolition Landfill, SW-590, Pipestone	Landfilled	3664	cy	163168	163168	40
Renville Co Sanitary Landfill, SW-90, Renville	Landfilled	5088	tons	124020	124020	17.4
Rock Co Demolition Landfill, SW-499, Rock	Landfilled	8815	tons	245372	245372	13.6
Canby Demolition Debris Landfill, SW-511, Yellow Medicine	Landfilled	4760	cy	18079	18079	4.5
Minnesota Falls Demolition Landfill, SW-474, Yellow Medicine	Recycled Landfilled	1484 4452	cy	79688	79688	15

Source: MPCA

Specific Programs in Counties

Cottonwood County: The current demolition facility is located near the sanitary landfill and is currently the only permanent site available for demolition debris disposal within the county.

Jackson County: There is no demolition landfill in Jackson County. Demolition waste goes to Nobles or Cottonwood, County facilities. Jackson County updated their Comprehensive Plan in 2010 and initiated an annual review of the Development Code. C&D facilities are a conditional use in the agricultural preservation, conservancy, urban/residential, multiple family urban district, general business, and general industry districts. They are prohibited in the flood plain and shoreland districts.

Lac qui Parle County: The current demolition facility is located 2462 241st Ave, Madison, MN and is currently the only permanent site available for demolition debris disposal within the county.

Lincoln County: The County does accept small amounts of demolition waste at its transfer station site. Some small amounts of demolition waste are currently disposed of with in a demolition roll-off at the County transfer station. This facility will accept reasonable volumes of demolition waste. The waste is then disposed of at the Lyon County Regional Demolition Facility. The County did previously mix the demolition with MSW, however, the expense and operational difficulties outweighed the benefits of continued practice of mixing demolition with MSWA demolition roll off.

Lyon County: The current demolition facility is located near the sanitary landfill. There are two other permitted facilities in the county: D & G Demolition Landfill and R & G Demolition Landfill.

Murray County: The current demolition facility is located near the former sanitary landfill and is currently the only permanent site available for demolition debris disposal within the county.

Nobles County: The current demolition facility is located near the sanitary landfill and is currently the only permanent site available for demolition debris disposal within the county. Nobles County Landfill, a private corporation (Waste Connections, Inc.), operates both a MSW and demolition and construction debris landfill under the same MPCA permit (permit # SW-11). Nobles County Landfill intends to continue to provide for demolition debris disposal at this site for the length of this 10-year planning period. As of January 1, 2008 (from the landfill's 2007 Annual Report) the remaining ultimate capacity of the landfill MSW area was 3,328,166 cubic yards and the remaining ultimate capacity of the landfill Demolition Debris area was 98,104 cubic yards.

Another Demolition Landfill located in Nobles County is the Murphy Bents Landfill located in Section 28 of Westside Township. The landfill obtained a Conditional Use Permit to operate the Demolition Land Disposal Facility in 1997 and applies for a Solid Waste and Recycling Facility License every year. The Murphy Bents Demolition Landfill is privately owned and only takes demolition from individual demolition jobs that the owners receive through bids and contracts.

Residents are also encouraged to use the Rock County Demolition Site near Luverne, MN. Demolition containing asbestos is referred to the Cottonwood County landfill near Windom, an approved disposal site.

Pipestone County: The current demolition facility is the Double D Demolition Landfill, located near Pipestone and is currently the only permanent site available for demolition debris disposal within the county.

Redwood County: There is no demolition landfill in Redwood County. Demolition waste goes to Lyon County.

Renville County: The current demolition cell is located near the sanitary landfill and is currently the only permanent site available for demolition debris disposal within the county. The county does not require a conditional use or separate operating permit for such a facility.

Renville County has operated a demolition landfill since 1981. The facility is centrally located within the county for the convenience of citizens and is open to the public. In 2001, Renville County's permit was modified to expand the demolition landfill. Continued training of county operators allows them to properly deal with prohibited materials such as caulk tubes, paint, household hazardous waste, or other materials which may be banned in the future.

Rock County: The current demolition facility is located near the former sanitary landfill and is currently the only permanent site available for demolition debris disposal within the county. Rock County is in the process of review and adoption of a specific section of the zoning ordinance to address the former sanitary landfill under the MPCA Closed Landfill Program.

Yellow Medicine County: There are two demolition facilities in the county, one near Canby and the other near Minnesota Falls.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff for Land demolition activities).

There was 3.54 FTE identified regionally to support the demolition debris programs. The County Staff responsible⁴ include: the SWA, SWA staff, HHW staff, landfill staff and secretary / Office manager. Financing is through the solid waste assessment, GMLCF Rebate, problem material disposal fees, and landfill tip fees.

Implementation Schedule

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| On-going | Continue to direct construction and demolition debris to the nearest C&D facility. |
| On-going | Continue the operation of County owned C&D facilities and whenever possible, encourage removal of recyclables from disposal. |

V. o. Solid Waste Ordinance**Goals and Policies**

- 1) The goal of the SWRSWC is to have uniformity in county solid waste ordinances to facilitate management of an integrated solid waste management system.
 - a) By January 2017, the SWRSWC will review all existing county ordinances and develop a model ordinance to be adopted by all member counties⁷⁸. The model will address:
 - Volume based fees
 - Other financial incentives for waste abatement
 - Licensing of and reporting by haulers and facilities
 - Construction and Demolition waste
 - Regulation of Illegal on-site disposal of solid waste
 - Identify authority
 - Enforcement and violations
 - Other items as necessary
- 2) It is the goal of the SWRSWC to eliminate on-site MSW disposal and illegal dumping and burning/burial in the 12-county region.
 1. The SWRSWC and its member counties will continue to provide all citizens with either a collection service or readily available disposal sites.
 2. The SWRSWC and its member counties through its proposed Communications Plan will inform the public of disposal options as well as the environmental and public health impacts associated with illegal on-site MSW disposal.
 3. By January 2016, the SWRSWC will discuss the adoption of a resolution and encourage all its member counties to adopt a resolution prohibiting illegal on-site disposal of MSW.
 4. To insure consistent and uniformity throughout the 12-county region, by January 1, 2017, the SWRSWC will develop a model enforcement policy and encourage its inclusion in all county solid waste ordinances.
 5. The SWRSWC and its member counties will provide assistance and guidance to each other, residents, and contractors on preventing improper disposal of structures.

Problems with implementation or enforcement of the current County ordinances include:

1. Waste hauler licensing procedure. An update of the ordinances or development of a procedure to license the haulers where hauler licensing is not implemented will address this non-compliance issue.
2. Redwood – Renville JPA will develop a JPA Solid Waste ordinance to address consistency within the two County Joint Powers Authority.

⁷⁸ The majority of the “SWRSWC member counties have encountered few problems in enforcement of their Solid Waste Ordinance. A complete copy of each of the County Solid Waste Ordinance can be found in Appendix E of this plan.

Specific County Ordinance status and issues

Cottonwood County: Original Ordinance 1992/3, Updated in 1993. The County would like to update the ordinance to address new waste haulers and general new practices at the landfill, within 1-3 years.

Jackson County: Original Ordinance 1992. The county does not plan to update at this time. If needed in the future, it will be to address the new technology available and to ensure compliance with new laws and programs. The county has addressed the changes necessary by resolution rather than changing or amending the ordinance.

Lac qui Parle County: Original Ordinance 1991. County has not identified any problems with the ordinance or its implementation. This Plan Update identified that the Solid Waste haulers are not licensed as required by County ordinance and state requirements. The County will review waste hauler licensing requirements and implementation within the next 1-3 years. During this review for implementation of hauler licensing; the County will review to tighten the ordinance with respect to open burning and illegal on-site disposal.

Lincoln County: Original Ordinance 1993, Updated in 1997. The County does not plan to update the Ordinance over the next ten years unless found necessary to meet the goals and policies of the SWRSWC Plan.

Lyon County: Original Ordinance 1992. The County monitors the Ordinance and update as merited.

Murray County: Original Ordinance 1991. Licensing haulers of haulers is identified within the Ordinance, however is not enforced. Five years ago, the Murray County Attorney advised the County Board to not license because the Ordinance requires the license to designate the disposal destination. The County will update the ordinance, remove disposal designation, address licensing of haulers, and general new practices at the landfill, within 1-3 years.

Nobles County: Original Ordinance 1972, updated in 1993 and 2009. The County has encountered few problems in enforcement of its Solid Waste Ordinance.

The 2009 update addressed new state laws and programs have been implemented since 1993. The language in the ordinance will reflect the new challenges that Nobles County faces since 1993. As the ordinance is reviewed, volume-based fees, other financial incentives for solid waste abatement, demolition solid waste, and regulation of on-site disposal of solid waste will be considered. The County would like to update the ordinance to address enforcement section of the ordinance and add fluorescent bulb management rules to Nobles County Solid Waste Ordinance, within 1-3 years.

Pipestone County: Original Ordinance 1993. The licensing of haulers is identified in the County Ordinance. The license process is that haulers provide a copy of their insurance to the County, and the County maintains a list of licensed haulers which is updated annually. The county does not charge a fee. The County does not plan to update the ordinance at this time unless found necessary to meet the goals and policies of the SWRSWC Plan.

Redwood County: Original Ordinance 1972. The County is likely to update the ordinance as the move to implement the JPA with Renville County - within 3 to 5 years.

Renville County: Original Ordinance 1992, Updated in 1995 (tire section added). All cities have a volume based fee requirement in their license which provides a financial incentive for county residents to recycle. Therefore, Renville County does not plan to make any changes to this provision. Renville County has had no problems enforcing the county's current solid waste ordinance. The County plans to update the Solid Waste Ordinance in 2014 to reflect changes in MSW and recycling operations (joint Redwood-Renville Counties project), as well as addressing hauler licensing. Licensing of haulers is currently addressed as it the Municipalities responsibility for solid waste collection, transport, and delivery to the landfill. Illegal on-site and illegal disposal of demolition materials is being reviewed by the Solid Waste Officer and possible changes may be made in the ordinance if needed. At this time the county does not plan to address on-site disposal for persons exempted by Minnesota Department of Agriculture rule 17.135, in the solid waste ordinance.

Rock County: Original Ordinance 1993. The County does not plan to update the ordinance at this time unless found necessary to meet the goals and policies of the SWRSWC Plan..

Yellow Medicine County: Original Ordinance 1998. The County does not plan to update the ordinance at this time unless found necessary to meet the goals and policies of the SWRSWC Plan.

A complete copy of each of the County Ordinances can be found in the Appendix E.

Estimated Program Budget, Responsible person, and Required Staff time (see Appendix A for county and aggregated budgets and staff identified for the administration of the Solid Waste Ordinance).

An estimated FTE of 1.08 was identified with the specific positions of county staff responsible as: the SWA, SWA Staff, HHW staff, and Office staff. The County Board and the county Attorney will be involved as needed when Ordinances are updated / adopted. Counties will update their ordinances as needed during the 10 year plan time frame. Financing for the update of the ordinances and Licensing was identified as SCORE, Solid waste Assessment, and General Revenue.

Implementation Schedule

2015-2016	Through use of the Communication Plan implementation, inform the public of disposal options as well as the environmental and public health impacts associated with illegal on-site MSW disposal.
January 2016	The SWRSWC will discuss the adoption of a resolution and encourage all its member counties to adopt a resolution prohibiting illegal on-site disposal of MSW.
January 2017	The SWRSWC will review all existing county ordinances and develop a model ordinance to be adopted by all member counties.
Ongoing	Assistance and guidance to SWRSWC member counties, residents, and contractors on preventing improper disposal of structures

V. p. County Solid Waste Staff

Each County's existing levels and needed staffing over the ten-year planning period can be found in Table 44 and is identified separately by County as well as for the Region. The budget identifies the costs through the ten-year planning period.

Table 44: Existing County Staff FTE

FTE %	Cot	Jac	LqP	Lin	Lyo	Mur	Nob	Pip	Red	Ren	Roc	YM	total
SWA	.87	.285	.21	.8	1	.25	.29	.13	1	.2	.54	.03	5.61
SWA Staff				.8	1.71	3.95	.93	.06	2.42	1	.18	.07	11.12
HHW Staff	.15		.4		1		.11	.5	.29	.5			2.95
Landfill staff	2.34		.05	.3	4.13	.25	.18			2	1.5		10.75
Secretary / Office manager	.53	.138	.17	.5	.8	.3	.02	.1	.29		.1		2.95
Sheriff Office / SS	.2	.0025											.2
County Board													.4
Other	.55											.01	.56
Total	4.64	.43	.83	2.4	8.64	4.75	1.53	.79	4.0	3.7	2.32	.11	34.54

Cottonwood. The County currently employees two FTE landfill workers, plans to hire a third person is in progress right now, this person will help with day to day operations as well as helping with the expansion of commercial recycling and other recycling programs this person will also help the administrator with new innovative ideas to improving the quality of life for the citizens of Cottonwood County.

Jackson. The staffs involved in solid waste activities in Jackson County consist of the following positions: Solid Waste Administrator and a Secretary for a 0.43 FTE. The County will continue to provide all the services currently provided to residents. The County will continue to monitor the current and future needs for additional personnel. As in the past, new legislation, new initiatives and the operating budget will continue to dictate the amount of staff needed and ultimately able to employ. Beginning in the summer of 2014, the county plans to add a seasonal Recycling Intern position for possibly up to three summers, continuing through the summers of 2015 and 2016. The intern's services will assist in the expansion of the Commercial Recycling and the Multi-Unit Dwelling Recycling programs.

Lac qui Parle. The County employs less than a full time equivalent (.83) to administer, enforce and provide outreach for the Solid Waste Program. The solid waste duties are shared among all duties of the Environmental Office for the County. Although no extra staff is being considered at

this time, there is certainly a need. The addition of staff time and/or personnel would be looked at if the funding were to come available. Additional staff time would be used to plan and hold more special collection events and extend hours of collection events we have now. More educational programs would be implemented in the schools and communities within the County. The recycling program would be enhanced to provide better services throughout the entire County.

Lincoln. The County employs 1 1/2 FTE to manage and operate the Solid Waste/ Recycling program and Landfill Transfer Site. As the County increases the priority of increasing our recycling Rate and improving our service to our residents, we will have to increase staff time to meet the need of an expanded program.

Lyon. The County Employs 8 FTEs to manage and operate the Solid Waste/Recycling/HHW Regional Program and Regional Sanitary and Demolition Landfills. The County will continue to manage and operate the current solid waste programs but prioritize where resources will best help achieve these goals. The County will redirect current staffing, financial and other resources to help achieve the goals of the SWMP.

Murray. The County currently runs a recycling facility and a demolition landfill. We currently and in the future plan to staff these facilities with 4.2 FTE at the recycling facility and .25 FTE and the Murray County demolition facility. Solid waste administration and clerical will be handled by the Ag and Solid Waste office. This will be two people and a .53 FTE.

Nobles. The Environmental Services Office is under the direction of its Director, who is responsible for the overall administration of the county solid waste programs and activities. The environmental staff consists of the following personnel: Environmental Director .29 FTE, Environmental Officer .93 FTE and Officer Manager .2 FTE. In addition to the paid Environmental Services staff, some assistance comes from the Prairie Ecology Bus, sheriff's department, soil and water conservation district, and "Sentence to Serve". For the past 4 years, the summer intern position for the HHW Facility has not been filled because of budget reasons. In regards to the future, more staff is needed to focus on the business within Nobles County. Performing business audits and increasing the commercial recycling rate is needed. This can be achieved by better education and on-site visits.

Redwood. The staff involved in solid waste activities in Redwood County consists of the following positions: Environmental Services Director, Recycling Coordinator, Assistant Recycling Coordinator, Recycling Assistant, and Office Manager. Between these five positions, there are four FTE's involved in waste related activities, including but not limited to; MSW, recycling, HHW, special wastes and all related clerical, record keeping and financial duties. Other jobs such as education, scheduling, and various other duties are handled by one or more of the individuals listed above.

Redwood County will need to re-evaluate all of these positions and duties as we move forward with the joint powers agreement between Redwood and Renville Counties. In the very near future, (6 months to 1 year) the hierarchy and job duties, assignments, and staffing numbers will need to be determined. At the end of this period, it will become necessary to completely change staffing numbers and requirements. It must also be noted that Redwood County will no longer

be the “employer” for staff working in the new Redwood/Renville Material Recovery Facility. These employees will be working for the joint powers board, with Renville County acting as the financial host and the entity which will govern these MRF employees. Many other changes, still not fully developed at this time, will need to be implemented within the next ten years.

Renville County: No additional staff needed at this time. West Central Sanitation provides recycling services and waste education for recycling throughout the county. The county will contract for educational services with another party in the absence of this arrangement.

Solid Waste Administrator – Jeff Marlowe FTE's: .2 Tasks: Supervise Solid Waste staff, implement and maintain Solid Waste Programs

Household Hazardous Waste Coordinator – Diane Mitchell FTE's: .5 Tasks: Maintain Household Hazardous Waste Program, Organize and Plan County Wide Cleanup, Continue Public Education.

Landfill Facilities Supervisor – Nellie Wersal FTE's: 1.00 Tasks: Maintain office records, Inspect loads, Operate the Landfill so it meets MPCA operational requirements

Landfill Operator – Robert Haney FTE's: 1.00 Tasks: Equipment Operator, Maintenance throughout the Landfill, and ensure daily MPCA rules are met.

Landfill Operator – Dustin Stahnke FTE's: 1.00 Tasks: Equipment Operator, Maintenance throughout the Landfill, and ensure daily MPCA rules are met.

In the near future once the Joint Powers Renville Redwood Regional Solid Waste facility is operational, Renville County will merge its Solid Waste program with Redwood County. At that time we will assess our Solid Waste Department and implement a new plan.

Rock: The Rock County Land Management Office (LMO) is under the direction of its Director, who is responsible for the overall administration of the county solid waste programs. Time allocated to solid waste related tasks is less than 1.0 FTE provided through staff at the Rock LMO. The Rock County MSW Transfer Station and its operation is under the supervision of the Rock County Highway Department. During the late spring, summer, and early fall months, seasonal help is on-site at the Transfer Station to assist in the increased waste handled through the facility. Southwest Youth Services, of Magnolia, provides some additional assistance on-site with picking up litter and weed control. No additions to staff are planned at this time.

Yellow Medicine. The County currently contracts to provide county wide recycling collection services for both residential and commercial entities. The County contracts with Lyon County for 300 hours to provide staffing to manage solid waste programs and promote education and collection events. To increase recycling goals the county will consider adding a .25 to .50 FTE to manage solid waste programs.

Region. Regionally, FTE for implementation of the Plan will initially be delegated to Counties. If it is merited, contracts or hiring of individuals by the SWRSWC will be implemented to complete needed activities.

V. q. Solid Waste Program Funding**Funding Policies and Goals**

The philosophy of the SWRSWC Counties is that the solid waste management activities should be self-sustaining; therefore, fees for services will have to be at a sufficient level to pay for the programs. Appendix A identifies the budgets for each of the counties, revenue sources and is aggregated in the regional budget. Table 20 identifies Solid Waste Assessments and fees collected by the member counties to fund the solid waste programs.

It is the policy of the SWRSWC Counties to use the dedicated SCORE and HHW grants received from the State for their intended purposes. Funds from the solid waste assessment and general revenue collected in the county are used to supply the required 25% SCORE matching funds.

Future Needs and Resources

As programs are increased to address the need for additional recycling, additional financial sources will need to be identified, such as a solid waste assessment on structures valued over a certain dollar amount (ie Lincoln County). There are likely to be minor regulatory changes and inflation will cause future costs to increase. This will be covered by increased tipping fees, property tax assessments, general revenue, and other solid waste assessments.

Specific Program Developed

Additional funding will be necessary during this planning period to ramp up the recycling and education efforts in the Region. The 10-year Estimated Solid Waste Budget located in the Appendix A includes all of the program funding

V. r. Plan Review and Ten Year Update

It is anticipated that this Plan will be approved in 2014, with a new plan required in 2022. The process will, assuming no change in Minnesota Statute, consist of the SWRSWC, member counties, and Solid Waste Administrators reviewing the existing plan, beginning in 2020. This process will be significantly easier because of the development and implementation of the work plan and annual documentation of results. The Goals and Policies will be reviewed by County staff and County Boards, and SWRSWC Commissioners, and revised as needed. The existing programming will then be reviewed in relationship to the goals and policies. Adjustments in the programming will be made in order to more effectively and efficiently achieve goals and policies.

Specific issues to be evaluated will be identified during the annual review include: ways to reduce landfilling and increase recycling, evaluation of individual county efforts and regional efforts, determine what is successful and what is not and build upon successes, of the annual status reports to the SWRSWC at their November meetings. Another purpose and outcome of the status reports at the November meetings will be to structure an annual review procedure and process involving the Solid Waste Plan itself. This process will enable the SWRSWC to review and evaluate the effectiveness of the goals, policies, and implementation schedules and the

flexibility to embrace new opportunities not known or recognized, at the time of Plan adoption, as well as prepare for changes when the new Planning process commences.”

The entire plan update process will be coordinated with MPCA staff and will include public outreach / input.

V. s. Development of the GVT

Data for the County Goal Volume Tables was inputted by each respective county, checked and revised by the MPCA. Once the county GVT's were completed, a consolidated GVT for the Region was developed by the MPCA. The estimated MSW land disposal capacity needed for the ten year planning period is 1,036,000 cubic yards; MSW delivered to the landfills in the SWRSWC planning area is 646,100 tons or 993,900 cubic yards; no industrial waste is identified in the Regional GVT.. Total waste to landfills from the 12 counties is 1,036,000 cubic yards compacted in place.

The estimated remaining permitted cell capacity at the land disposal facilities in the planning area is 993,900 cubic yards. According to the GVT, Lyon County will need a permit for a new cell in 2015, Cottonwood County by 2017, Nobles County by 2020 and Renville Counties by 2022.

The County and Regional GVT are located in Appendix A. The regional landfill capacity use totals are found in Table 44.

V. t Development of the Solid Waste Program Budget

The ten-year solid waste budget for each SWRSWC County, a consolidated budget, and budget for the SWRSWC is located in Appendix A. These budgets are based on budgets from 2011 for the solid waste programs and operation of facilities. Program expenses are expected to escalate at two percent per year due to price inflation. Program revenues that are determined and controlled by individual counties are also expected to escalate with inflation. Program revenues provided through grants are beyond the control of the counties. It was assumed that the State SCORE funding will remain constant at the 2011 level. This was reflected in the increased Service Fees / Household Assessments and Other Revenue sources that increase as the grant dollars (SCORE) remain the same and there are inflation impacts to program costs.

The initiative to develop and implement a Communication Plan will reduce duplication of staff/financial resources, thus enabling the financial resources needed to implement the solid waste programs to increase at a slower rate. Based on these considerations, it appears that increased local funding will be required to maintain programs at their current levels. It is uncertain whether the counties will be able maintain the current level of Solid Waste Management Service without an increase in other revenue and service fees and / or assessments. The counties will re-examine funding sources of their Solid Waste Management programs in order to determine the best environmentally sound and fiscally prudent ways to manage waste. Additional funding sources will need to be identified and accessed to supplement Solid Waste Management practices identified in the plan.

Table 45: LANDFILL CAPACITY USE TOTALS - for ALL Solid Waste Received at LF in the Co. -- tons

TONNAGE VALUES	2011	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10 yr
MSW to Cottonwood Co	8,697	8,103	7,812	7,615	7,522	7,430	7,345	7,261	7,176	7,092	7,007	74,363
MSW to Lyon County (2011, 29 t to McLeod Co fr LqP)	43,803	38,652	38,521	31,812	31,772	31,738	31,737	31,735	31,734	31,732	31,731	331,164
MSW to Nobles Co	17,984	15,375	15,068	14,796	14,544	14,291	14,248	14,205	14,162	14,119	14,076	144,884
MSW to Renville Co	8,405	8,109	7,548	12,443	11,751	11,063	10,307	9,552	8,796	8,041	7,285	94,822
MSW WMI – Spirit Lake IA	2,872	2,998	2,868	2,751	2,704	2,658	2,634	2,610	2,586	2,562	2,538	26,909-
Total MSW Received @ SWRSWC Total (Cottonwood, Lyon, Nobles, Renville) - tons	78,900	70,200	68,900	66,700	65,600	64,500	63,600	62,800	61,900	61,700	60,100	646,100
Ind & other Non-MSW Waste to MSW LF in Co -tons	0	0	0	0	0	0	0	0	0	0	0	0
Total SOLID WASTE REC'D at SWRSWC Landfills	78,900	70,200	68,900	66,700	65,600	64,500	63,600	62,800	61,900	61,700	60,100	646,100
<u>CUBIC YARD CAPACITY USE -- COMPACTED IN-PLACE,</u>												
SWRSWC MSW to Landfill	121,400	108,100	160,100	102,600	100,900	99,300	97,900	96,500	95,200	95,000	92,500	993,900
Industrial Waste	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL LF CAPACITY USE - SOLID WASTE + COVER	133,500	118,900	116,700	112,800	111,000	109,200	107,700	106,200	104,700	104,500	101,700	993,900
<i>Cottonwood Co Landfill</i>	<i>19,133</i>	<i>17,827</i>	<i>17,186</i>	<i>16,753</i>	<i>16,548</i>	<i>16,346</i>	<i>16,160</i>	<i>15,974</i>	<i>15,788</i>	<i>15,602</i>	<i>15,415</i>	148,726
<i>Lyon County Landfill</i>	<i>91,143</i>	<i>84,236</i>	<i>84,046</i>	<i>69,408</i>	<i>69,321</i>	<i>69,249</i>	<i>69,234</i>	<i>69,220</i>	<i>69,206</i>	<i>69,191</i>	<i>69,117</i>	601,905
<i>Nobles County Landfill</i>	<i>30,400</i>	<i>2,600</i>	<i>25,500</i>	<i>25,000</i>	<i>24,600</i>	<i>24,200</i>	<i>24,100</i>	<i>24,000</i>	<i>24,000</i>	<i>23,900</i>	<i>23,800</i>	222,900
<i>Renville County Landfill</i>	<i>14,200</i>	<i>13,700</i>	<i>12,800</i>	<i>21,100</i>	<i>19,900</i>	<i>18,700</i>	<i>17,400</i>	<i>16,100</i>	<i>14,800</i>	<i>13,600</i>	<i>123,600</i>	145,900
Remaining PCA Permitted LF Capacity	602,220	483,354	366,671	253,852	142,855	33,664	(74,030)	(180,227)	(284,927)	(389,411)	(491,117)	
<i>Cottonwood Co Landfill</i>	<i>86,207</i>	<i>68,380</i>	<i>51,194</i>	<i>34,441</i>	<i>17,893</i>	<i>1,547</i>	<i>(14,613)</i>	<i>(30,578)</i>	<i>(46,375)</i>	<i>(61,976)</i>	<i>(77,392)</i>	
<i>Lyon County Landfill</i>	<i>172,970</i>	<i>88,734</i>	<i>4,689</i>	<i>(64,719)</i>	<i>(134,040)</i>	<i>(203,289)</i>	<i>(272,523)</i>	<i>(341,743)</i>	<i>(410,949)</i>	<i>(480,140)</i>	<i>(549,317)</i>	
<i>Nobles County Landfill</i>	<i>192,702</i>	<i>166,682</i>	<i>141,183</i>	<i>116,142</i>	<i>91,530</i>	<i>67,345</i>	<i>43,232</i>	<i>19,193</i>	<i>(4,773)</i>	<i>(28,665)</i>	<i>(52,486)</i>	
<i>Renville County Landfill</i>	<i>150,341</i>	<i>136,618</i>	<i>123,845</i>	<i>102,787</i>	<i>82,901</i>	<i>64,179</i>	<i>46,761</i>	<i>30,635</i>	<i>15,785</i>	<i>2,203</i>	<i>(10,125)</i>	

V. u. Alternatives to Proposed System

SWRSWC will include methodology to monitor and evaluate the activities to avoid operational difficulties in the Waste Reduction, Waste Education and Recycling activities. If the activities are found to be ineffective, cannot be developed, or have operational difficulties, alternative strategies will be found to develop and implement in order to reach the goals identified in this Plan.

- 1) On an Annual basis, the SWRSWC will monitor and evaluate the Waste Reduction, Waste Education, and Recycling Activities in the planning area, by county and as a region.
 - a) In July of each year, the SWA's will meet to review the SCORE data by county and as the region and compare the data to the Goal Volume Table and programs implemented.
 - b) The SWA's will develop a draft report with what programs are working well, recommendation on additional programs to initiate, as well as programs to drop.
 - If initial data reveals goals are not being met and alternative strategies need to be developed and implemented; the SWA's will begin to identify alternatives for implementation.
 - c) A full written progress report will be presented and reviewed by the SWRSWC at their November meetings where further direction by the SWRSWC will be given.
- 2) If the SWRSWC finds activities are found to be ineffective, cannot be developed or have operational difficulties, alternative strategies will be researched by seeking input from the SWA's, MPCA and other organizations.

V. v. Environmental and Public Health Impacts

The SWRSWC and member counties have well-planned and thought out solid waste management methods and technologies, however there will still be a certain level of risk for environmental and / or public health impacts associated with its use and operations. The associated risks are important factors to consider during the planning process as various solid waste management alternatives are evaluated by the SWRSWC and member counties. In previous areas of this Plan, environmental risk has been identified and discussed; in addition, risks associated with illegal on-site disposal and illegal dumping will be addressed.

General Policy and Goals

It is the goal of the SWRSWC that the residents will dispose of their solid waste in a manner consistent with state and local law. The SWRSWC counties have established standards for and regulating solid waste disposal facilities, including licensing requirements and enforcement penalties. Many of the regions residents are engaged in farming are allowed to dispose of solid waste on-site under current state laws. In recent years on-site disposal has been reduced because of fewer farm sites and more rural residents utilizing a licensed hauler for the collection of waste to the landfill.

All counties have rural drop off sites for recycling (sheds, containers, etc). Nobles, Lincoln and Redwood Counties also have receptacles for waste disposal in rural areas. Rural MSW pick up and self-haul is utilized by many residents. Regionally, 6.9% of the rural population disposes of solid waste on-site, utilizing the agricultural exemption. As presented on Table 13, the estimated percentage of waste

disposed of illegally on-site ranges by county, from 1.8% (Lyon) and 3.0% (Nobles) to 14.6% (Renville) and 19.1% (Lac qui Parle).

Specific Program to be Developed

The counties will continue to vigorously investigate reports of illegal dumping and will encourage all of its citizens to follow laws pertaining to the solid waste and promote the options of self-hauling or commercial pickup as alternatives to on-site disposal. This will be part of the regional waste education program.

Illegal On-site disposal. On-site disposal continues to be practiced in the rural areas of the region. Based on the Goal Volume Table calculations, approximately 11,087 tons of the waste stream is managed by on-site disposal practices. During the last planning cycle, the SWRSWC Counties initiated the burn barrel campaign, which is believed to have an impact on reducing the amount of on-site disposal. Changing these practices will continue to present a significant challenge and a continued education effort coupled with other techniques to reduce illegal on-site disposal will need to be researched and implemented. An example of an approach that is working in Lincoln and Redwood counties is to have MSW containers available at the recycling sheds. A similar approach, two townships sited dumpsters for their residents was used in Jackson County and they discontinued it because of the abuse of the sites. The lesson learned is while similar techniques will likely work throughout the region, how they are implemented may need to differ.

The SWRSWC recognizes that on-site waste management is illegal and has the potentially to adversely impact the environment, including impacts on water resources and highly localized impacts on air quality. The SWRSWC Counties will continue to take incremental steps in addressing the issues of on-site disposal.

- 1) Natural Attrition: The number of household managing waste on-site illegally is declining over time. The Goal-Volume table estimates the decline at from 6.9% to 5.4% in 2016 and 4.6% in 2021. This will result in approximately a 34% reduction of the illegal on-site disposal (from 11086 tons in 2011 to 7213 tons per year in 2022). The attrition comes primarily from the loss of rural population in the Region. There is also growing recognition of the risks and nuisance associated with illegal on-site disposal, which has led to voluntary curtailment of on-site management.
- 2) Educational efforts: The SWRSWC and member counties will include in the SWRSWC Communication Plan, educational program information regarding the laws pertaining to illegal on-site disposal; as well as a template of educational materials pertaining to the risks and nuisances of on-site disposal.
- 3) Targeted promotion of waste abatement activities: Rural residents will be targeted for the promotion of waste abatement activities: including source reduction, recycling, and composting.
- 4) The SWRSWC and member counties will monitor the success of the above actions at their November annual report meeting. The SWA's will provide recommendations on future actions both during the ten year life of the plan as well actions in the next solid waste plan. Possible programs for examination and consideration would be developing rural waste collection systems. Such systems might be rural dumpsters, paid for through a solid waste assessment on property owners.

Illegal Disposal. The SWRSWC member County Solid Waste Ordinances specifically prohibit dumping of wastes, establishes dumping and littering as a misdemeanor offense. Enforcement of such actions is the responsibility of the Solid Waste Administrator. Illegal dumping frequency has reduced and has become an issue of limited concern. If egregious illegal dumps are located which potentially threaten the air, surface water or groundwater the county will compel the property owner to remove the waste in a timely manner. If the illegal dumping occurs on county property the county will remove the waste in a timely manner.

A permit is not required from a state agency, except under sections 88.16, 88.17, and 88.22, for a person who owns or operates land used for farming that buries, or burns and buries solid waste generated from the person's household or as part of the person's farming operation if the burying is done in a nuisance free, pollution free, and aesthetic manner on the land used for farming⁷⁹. This exception does not apply if regularly scheduled pickup of solid waste is reasonably available at the person's farm, as determined by resolution of the county board of the county where the person's farm is located (Minnesota Department of Agriculture Rule 17.135). This exemption does not apply to burning tires or plastics, except plastic bailing twine, or to burning or burial of the following materials: household hazardous waste, appliances, lead acid batteries from motor vehicles, household batteries, and used motor oil.

Burning structures. The SWRSWC counties do provide some oversight and assistance with performing pre-demolition inspections on structures, especially in the unincorporated areas. This helps to prevent the improper disposal or on-site disposal of HHW, appliances, tires, motor oil, and other problematic/banned waste materials. Guidance/direction is provided to those who contact county offices for proper disposal.

Enforcement: The Solid Waste Staff and the sheriff's offices investigate complaints alleging the illegal disposal of solid waste. In the event violators are found, enforcement occurs on the local level.

If deemed necessary by a County's Board, the county may in the future address illegal disposal in its solid waste ordinance by incorporating greater authority and penalty assessment provided in Minn. Stat. § 115A.99 Litter Penalties and Damages; or, Minn. Stat. § 609.68 Unlawful Deposit of Garbage, Litter or Like; or, Minn. Stat. §375.18, Subd. 14 General Powers, Unauthorized Deposit of Solid Waste.

⁷⁹ Burning permits are issued by the Minnesota Department of Natural Resources (DNR) or someone commissioned or delegated the authority to issue burning permits by the DNR such as, a fire warden. In southern Minnesota counties lacking DNR forestry offices, county sheriffs often are delegated the authority to issue burning permits. Burning permits are required for all open burning other than small recreational fires. Minnesota law prohibits the burning of certain "prohibited materials". Prohibited materials include: rubber, plastics, chemically treated materials, or other materials which produce excessive or noxious smoke including, but not limited to, tires, railroad ties, chemically treated lumber, composite shingles, tar paper, insulation, composition board, sheetrock, wiring, paint, or paint filters. Other items explicitly prohibited from burning by Minn. Stat. § 88.171 include: hazardous waste, demolition debris (from commercial or institutional structures), motor vehicles, and garbage. In general, only the following materials can be burned with a DNR burn permit: vegetative debris (brush, logs, stumps, grass, leaves) and clean wood (never treated, painted, or stained) that is from a non-commercial, non-institutional structure.

V. w. Solid Waste Facility Siting

This Plan does not propose the development of new or expanded waste facilities that would require a siting program. The existing landfills have sufficient capacity available through the life of this plan update. If the county's plans change to include a new or expanded facility, public notification and participation methods will be implemented that would not only satisfy state law, but would serve the best interests of the citizens in the SWRSWC Planning area.

Since no new resource recovery or landfill facility was considered for construction as described in Section IV, Proposed Integrated Solid Waste Management, no developmental or siting plans are being proposed at this time.

V. x. Public Participation

Methods for Documenting Public Participation. All documentation of regional public participation and public input through the Solid Waste Commission meetings regarding the Solid Waste Management Plan will be maintained on file in the Southwest Regional Development Commission⁸⁰ who maintains SWRSWC Minutes. Documentation of public participation in individual counties will be maintained by the each County Solid Waste / Environmental Office. Separate files will be maintained for comments made by citizens, public advisory committees, regional authorities, adjacent counties or districts, local units of government and solid waste service companies conducting business within the County. Records to be kept will include all correspondence sent, notes and records of related public meetings, notes and records of telephone calls, and paper copies of e-mail received.

Stakeholder participation was used in the planning process for the plan development. Stakeholders consist of the SWRSWC board members, the Solid Waste Administrators from Cottonwood, Jackson, Lac qui Parle, Lincoln, Lyon & Yellow Medicine, Murray, Nobles, Pipestone, Redwood, Renville, and Rock counties, the Redwood-Renville JPA, the Southwest Regional Development Commission board and staff, Minnesota Pollution Control Agency Staff, with input from haulers, waste facilities, public entities, and public. The SWRSWC meets four times per year and meetings are open to the public. Member counties also have meetings with private haulers, businesses, city staff, and civic groups to discuss any and all related solid waste and recycling issues, ordinances, and State Statutes under Minnesota Statutes 473 and 115A.

During 2013-2014, the SWRSWC held meetings where the solid waste management plan, the integrated system, as well as changes to the system and the planning process were discussed. These meetings are open to the public and are noticed through the county notice process. Individual County ordinances, resolutions, and plans are available at county offices and / or on-line.

Prior to the solid waste plan public hearing process, each member county will notify the solid waste haulers, municipalities, school districts and other interested parties of the website location of the SWRSWC Solid Waste Management Plan. The notification will include: the request that they review the plan to enable modifications to be made to the plan if needed, a timeline of when the review comments and input to be accepted for plan revision as well as the timing for the public hearing process

⁸⁰ Southwest Regional Development Commission, 2401 Broadway Ave, Slayton, MN 56172

An ongoing Process to ensure the involvement and consultation with interested parties will be maintained as follows: Solid waste management is regularly discussed at County Board meetings, which are public and open, and noticed in the local newspaper, including the agenda. Board meeting minutes are published in the local newspaper and on-line. The Solid Waste Administrator Office maintains an open access to all county residents and interested parties.

Further, upon preliminary MPCA staff approval this plan will be placed on public notice and be open to comments from the public. Each County Board of the SWRSWC will adopt the Plan as well as the Southwest Regional Solid Waste Commission. Approved minutes will be available upon request. The twelve county resolutions as well as the SWRSWC resolution adopting the Plan will be in Appendix F.

V. y. Multi County Planning

Compliance with Minnesota State and Rules are identified within the plan.

The Regional Solid Waste Management Plan will be overseen by the SWRSWC. All member counties have responsibility to implement areas of the plan, either individually or collectively. A major step toward implementation is the development of a Communication Plan that will enable the counties to use a template for much of their activities, reducing duplicative efforts. Development of an update of the guidance document that will serve as an annual work plan to measure the success of the integrated waste management strategies. A website presence and use of social media will enable additional outreach. Regional Trainings sponsored by the Solid Waste Commission and / or the Regional Solid Waste Administrators will assist in educating groups – such as contractors on the proper process for disposal of rural building. Other activities that will be looked at on a regional basis are grant funding requests, business waste audits, and common recycling disposal methods.

The Regional Plan will be adopted by each of the member counties as well as the SWRSWC. Copies of the resolutions are included in Appendix F.